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# THE SOUTHERN STATES.

MARCH, 1896.

## AGRICULTURAL CAPABILITIES OF THE SOUTH.

### VII.—SHEEP RAISING (Continued.)

*By M. B. Hillyard.*

I have seldom found more interesting reading on agriculture and kindred topics than is found in old books such as the United States Agricultural Reports prior to the war, De Bow's Review, etc. If one wants to know how the South was forging ahead, in many lines, he can there find surprising facts. The pace of progress in the South, from 1840 to 1860, was surprising in most lines cognate to agriculture. The Ruffins, Ravenals, Afflecks, Phillips and others had agitated and aroused, so that there was a keen appetite for progress. Agricultural societies were doing much. A friendly competition in raising large crops, fine stock, and all that, had become rife. And it was free from a sordid and mercenary spirit. There was only a generous emulation, a beneficent pride in success. In no lines did this spirit of progress find such notable illustration as in raising the finest blooded or thoroughbred stock. This ambition laid the foundation for the South's being the seed-bed, as it were, of, and the incentive to, raising the finest stock in the country. The race-tracks of Southern States made running horses to be bred. The wealth and pride of Southern planters incited them to purchase and propagate fine sheep and cattle. As a rule, most planters were rich, especially sugar and cotton planters. They were lavish in hospitality and extravagant. And then extrava-

gance took the bent often in investing in fancy-bred sheep and cattle. The farmers North and West could not afford, and would not have indulged in, the extravagance of paying such fancy prices for horses, cattle and sheep as was not uncommon South. Let me not be misunderstood. I do not mean to say that there were not farmers North and West who had not fine sheep, cattle, horses. What I mean is, that the breeding of fancy stock was far less diffused there than South (of course I include Kentucky in the South).

I have not gone into this excursion into the past without a motive. Of course so many persons South raising fine stock gave them a chance to test their adaptation to the South; whether they deteriorated or advanced; whether race-horses had better or worse bottom; whether short-horns improved or declined in size and quality of beef; whether wool got coarser or finer; whether mutton improved in or lost flavor. Another point: As is well known, the wealthy class in the South before the war traveled a great deal. Their summers were almost universally spent either in Europe or north of Mason and Dixon's line. A few halted at the Virginia springs; but mostly the summer visitors, who spent that season on this side the Atlantic, went to Bedford Springs, Pa.; Newport, R. I.; Saratoga, N. Y.; Cape



May, N. J. Those who went to Europe, went to England, Scotland, France, Switzerland. And parts of the South sent a large infusion of persons of French and Scotch descent. Thus these planters and their families, spending their summers in this country at the fashionable hotels of Saratoga, Newport and the other places in this country, where they found the best lamb, mutton, beef this country could afford, had a chance to compare the South with these meats. Those who went to England could compare their Southern short-horns with the English beef. Those who went to France, Switzerland, Scotland, could compare their Southern mutton with the "mountain mutton." Thus it came that these Southerners, as a class, were the very best judges of what was good—the best—beef and mutton. I should hesitate to assert that the South can produce the best beef and mutton in the world; but I should say that anyone who is not satisfied with the best mutton and beef the South can produce is a greatly affected or greatly spoiled epicure.

Nearly or quite quarter of a century ago Col. Thomas C. Dabney, of Hinds county, Mississippi, told me that General John C. Breckenridge, of Kentucky, had been his guest in Mississippi, and had told him that his South-down lambs and mutton had as fine a flavor as the best he had ever eaten in Kentucky. Will that test do for Mississippi mutton? Col. Dabney was born and raised in the mountain country of Virginia; hence he could compare the States of Mississippi and Virginia.

On page 366, Agricultural Report, 1850, is a report from Hon. A. G. Brown, a former governor of Mississippi, a Senator of the United States from that State before the war, and a Senator from the same State of the Southern Confederacy. It so happened that he was a neighbor of Col. Tom. Dabney, just quoted. He says: "In my district we have the South-down, Bakewell, Merino and other blooded sheep. \* \* \* Mutton equal to any in the world. Planters

do not raise any more than needed for family use. South Mississippi fine sheep country." I want to make a double point with his authority: First, no one can doubt that such a man as Governor Brown was a judge of good mutton. He had not spent so large a part of his life in Washington—to say nothing of travel—without knowing what he was talking about, in comparing Mississippi mutton with any in the world. The second point is, the general diffusion of blooded sheep among the planters.

A writer from Berkeley county, Virginia, on pp. 334-335, Agr. Rep., 1850, says: "Berkeley county great market for sheep. Sent 6000 annually to Baltimore. High reputation for flavor."

To illustrate the prevalence of sheep raising, I quote from page 448, Agr. Rep., 1850, from a writer from Dunlapville, South Carolina: "Almost every farmer has a small flock of sheep to supply winter clothing."

Hon. E. Crawford, of Early county, Georgia, says, on page 28, Agr. Rep., 1853: "Horses and mules, as well as cows, hogs and sheep, are raised by every judicious planter in *all* South-western Georgia." (I have italicized the word "all" to emphasize the fact of how almost everybody raised more or less sheep.)

Here is a note I make from a noted name in Georgia. It is from Wm. C. Dickson, Milledgeville, on page 393, Agr. Rep., 1850: "Wool-growing profitable, but dogs scare off the business. Most farmers raise wool enough for their own use." (The pointers and setters, fox and deer hounds of the planters' sons were a great drawback.)

From Fort Jessup, Louisiana: "Sheep here are Merino, Saxon and native. Very fine wool." Page 398, Agr. Rep., 1850. (Fort Jessup is in Northwest Louisiana. I beg the reader to note the threefold points of Saxon sheep, fine wool and no feed.)

From Macon county, Tennessee, on page 353, Agr. Rep., 1851, is the report of sheep and wool for family use. (The commonness of the business in a small way is the point.)



From Laurensville, South Carolina, comes the report: "Sheep and wool only for home consumption" (p. 89, 1852).

Robert W. Baylor, Jefferson county, Virginia, says, on page 53, *Agr. Rep.*, 1855: "Sheep very profitably raised here, especially improved breeds; commanding at home \$8 to \$10 each. We have as good imported Cotswolds and Southdowns as England can produce."

Thomas Affleck, a great name in Mississippi then, says, in *Agr. Rep.*, 1849: "Few planters keep more sheep than enough to supply their own tables with that most excellent dish, a saddle of Mississippi mutton, which compares favorably with the mountain mutton of Scotland and Wales. They suffer at times severely from dogs." (Mr. Affleck was quite an importer of fine sheep.)

A writer from Amherst county, Virginia, in *Agr. Rep.* for 1850, says: "Enough sheep to clothe our families and to furnish mutton and lambs."

In same report a writer in Granville county, North Carolina, says: "Much more attention is now paid to wool-growing than formerly. The number of sheep in this neighborhood has doubled during the last five years. Wool is now becoming an article of export. Most of our winter clothing is now made at home; and in our dwellings you may see some carpets as nice as can be found anywhere."

As an interesting corroboration of the point I have so often made, how the South was moving up before the war on various lines, I quote an extract (although aside from the points I am particularly enforcing) from a writer on page 287, *Agr. Rep.*, 1850: "In Columbus, Ga., forty-five miles north, are several large woolen factories lately established, and others are being erected, which will cause a demand for wool."

Here is an interesting page from *Agr. Rep.* of 1850. My note fails to give the State:

"Sheep might certainly be raised with profit, both for mutton and wool; but, again, we have no market for either. My neighbors generally will

not eat mutton, and as there are yet but few manufactories that use wool, scarcely more is produced than what is required for domestic use. I have made all my negroes winter clothes and blankets for thirty years. I long kept a little flock of grade Merinoes and wool for family use, and have raised full-blood quite as fine as my original Escorial stock; but found the full-blood too fine for our farmers' use; they cannot card it. I now keep from eighty to 100. Price for wool just the same, fine or coarse—twenty-five cents per pound. Sheep very little expense. A market for wool rising up in the manufactories that are rapidly growing in the Southern States, and it will, ere long, become an important branch of Southern husbandry. For twenty years I raised as fine wool as Spanish stock or any samples I could obtain from the North; sold in Philadelphia at fifty and sixty cents."—Wilmot I. Gibbs, p. 263.

But I must hasten on. I could give numberless quotations further, particularly as to the almost universality of the production of enough mutton for family use by the planters. I have surely said enough to convince anyone as to that point and as to the quality of Southern mutton. I would, however, recommend the reader who is still skeptical or critical to a valuable article on sheep-raising South by George C. Patterson, of Hopkins county, Tennessee, page 53, *Agr. Rep.*, 1849; also an article, page 33, same report, on the climatic advantages South; also to the extraordinary sheep raised by Josiah W. Ware, of Clarke county, Virginia, narrated on page 16 of *Agr. Rep.*, 1849.

I had intended to say something of the wonderful stimulus giving to sheep-raising by the numerous agricultural societies that sprung up in the South from 1850 on; but I must pass to other points.

There is a most interesting field for exposition as to the future of the South in manufacturing fabrics from the Saxony wools. To silence all doubt, I must be allowed to quote from Mr. John L. Hays's great work: "The



Electoral wools cannot be grown in the North, because of the extreme delicacy of the sheep. In the mild climate of the South their successful culture is assured beyond all question."—P. 13.

Were I a younger man, and did I wish to signalize my life by a great achievement, or the advocacy of a great scheme, to nothing would I turn my attention with the assurance that I had wrought, if successful, a great industrial revolution, as by making the South the centre of the production of these Electoral wools. As the South is destined, in the next fifty years, to be the centre of cotton manufacture, shutting up the English mills, and closing or transferring the New England mills South, so the South ought to shut up the manufacture in France and England of the fabrics from Electoral wools! With the cheap land, the cheap labor and the climate of the South, neither France nor England ought to be able to run a spindle in the manufacture of these fabrics. But it will take a campaign of education, of stupendous activity and persistence. The South starts so late in favor of protection that she is endangered by the probability of a revolution of sentiment in favor of free trade in the very strongholds of protection. Iron manufacturers are in favor of free iron ore, North and East, who are near the coast, so as to import ore dug by cheap labor; New England wants free coal, to offset the competition of the advantages in favor of Southern cotton manufacture; pig iron manufacturers East want railroads to raise rates upon pig iron from Southern furnaces, lest their own furnaces may have to go out of blast; woolen manufacturers want a low tariff on wool, so as to import foreign wools. And if ever the South gets fairly agoing on

sheep-raising the wool-raisers in Ohio and other great wool-raising States North and West will be in favor of free wool, because they can't produce it in competition with the South.

When the Nicaragua canal comes, and the Australian wools begin to pour in, we shall have some aspects that will be surprising. But we have never yet stripped for the fight. But the conflict is coming. Years ago I foretold it. The negro will drift from the field to the factory. We shall not only find that race in the mines, but elsewhere. As the cotton area narrows, the race will find employment. We have him here in a variety of ways—almost master of the situation at times. Soon capitalists East will be putting the colored graduates of the female colleges in the cotton factories. They won't go to the cotton-fields. They can't all teach school and play house servants. Then will come competition with our Southern white labor in the cotton factories. No man ever dreamed the reserve force the South has in this aspect of cheap labor.

So I think, with our climate and cheap land for sheep, and our cheap labor (and we have never yet got anything like the productive capacity of our white labor in operation), the South will be able to stand the racket of free trade, if worse comes to worse. But if our country prospers as it ought, we ought to have protection for it, and for the South particularly—a good while yet.

I had intended to say considerable as to the opening for raising early lambs South for the markets North and West; but my letter is too long already.

Then there is the all-important topic of the superior healthfulness of sheep South over the North and West; but that is impossible now.

## AN INSIDE VIEW OF SOUTH CAROLINA HISTORY.

*By Arnot Chester.*

The "inside history" of South Carolina is not generally "understood of the people" beyond her own borders, yet this history it is which has molded the State character and powerfully influenced State politics. Indeed, it is the key without which it would be impossible to explain many anomalies of State history. Presenting an unbroken front to the outside world, a unit on all questions of national politics, South Carolina has nevertheless always been divided within herself into two jarring and irreconcilable factions. How this sectional antagonism originated, or when it first developed itself, it is impossible to say; as far back as it can be traced it is found existing in full force. But this unnatural and unfortunate animosity once started, it is easy to understand how the peculiar circumstances and conditions which prevailed should have perpetrated and aggravated it. Unlike her more favored sister, Virginia, in the South Carolina of ante-bellum days the wealth and culture of the State were confined to a single section, instead of being distributed throughout.

This section was the seaboard, or "low country," as it was called.

In the days of which I write, King Rice divided with King Cotton the sovereignty of the State of South Carolina. And King Rice held his court exclusively along the coast.

There lay the great plantations, containing thousands of acres and worked by hundreds of slaves. Their owners belonged to the class which it is now the fashion to call "Bourbons," and constituted the landed aristocracy of the State.

In this same section, too, were located the largest and most important towns and (supreme honor and distinction!) Charleston herself, the "city" *par excellence*.

Naturally, therefore, it came about that the combined advantages of wealth, education and contact with the great outside world which were enjoyed by the coast-people produced in them a grace and refinement of manner, and a breadth and culture of mind, altogether unknown to their brethren of the "up-country" as the other division of the State was designated.

This difference was inevitable; but it was not inevitable, but most unfortunate, that instead of regarding these superior advantages as privileges necessarily entailing upon them corresponding duties and responsibilities towards their less favored neighbors, the people of the low-country arrogated to themselves the position of censors and critics, and from their elevation looked down with condescension and contempt upon the dwellers of the interior!

To say that this attitude was bitterly resented by these last is simply to say that human nature is the same in South Carolina as it is elsewhere.

Yet having so fully and unreservedly meted out the blame that of right belongs to the low-country in this matter, justice and honesty alike demand the statement that the provocation was by no means altogether on its side.

Except in the matter of politics, it had nothing in common with its up-country neighbor.

The manners, the customs, the modes of thought, the very intonations and inflections of the people were different. As a class, the people of the up-country were rough, uncouth and ignorant. Their lack of breeding disgusted; their want of culture repelled; their marvelous instinct of thrift and money-making fairly bewildered the low-country intelligence! How best to "turn a penny" seemed the one supreme problem of their existence!



the end to which their every power was to be bent!

When brought into contact with these people, the denizens of the low-country naturally felt that they were among an alien race, and instinctively recoiled. They failed to see, alas! that the imperative need of these people was education; and so instead of applying the remedy, they withdrew themselves and their civilizing influences, and stood farther and farther aloof from those whom they might gradually have raised to their own level. This mutual distrust and aversion had gone on strengthening for generations, until at last, just before the civil war, it was a recognized fact that in the government of the State each faction was determined to legislate solely in its own interests. Nay, more, as these interests were felt to be conflicting, each endeavored to so frame the laws as not only to help its own side, but also to hamper and cripple the other.

With the war came, of course, a new era in State life. And at its close "old things had (indeed) passed away" forever! So far as material prosperity

was concerned, the former conditions were now completely reversed. The low-country was left beggared, ruined, depopulated; while the up-country had escaped almost uninjured. For a time chaos and confusion reigned, and sectional differences were temporarily forgotten. But as things gradually righted themselves, instead of being allowed to die away, the smoldering fires of party hate were sedulously fanned into new life by artful and unscrupulous politicians, who desired thereby both to secure the prizes of their personal ambition, and also to vent their party spite upon the objects of their party animosity.

Such is the unhappy condition of South Carolina politics today.

The fair dreams of a united and harmonious State which some of us were sanguine enough to cherish a few years since have receded indefinitely. Yet since it is "the impossible which comes to pass," we may still hope that some day in the dim and distant future the State of South Carolina may become indeed a thoroughly united and homogeneous whole!

## OLD FIELD HOMILETICS.

### PART III.—FACTORY CHEESE AND CREAMERY BUTTER.

*By Charles Hallock.*

Having demonstrated in the initial number of these papers that good permanent pasturage\* can be provided in the Southern tier of States, and that gilt-edge dairy products can be obtained from the grasses and fodder crops grown, it will be in order now to advance some cogent reasons why dairies ought to be established in the South, to show where the values come in and what the profits are, and, finally, to present some working figures for the service of such as may become

sufficiently interested to undertake new ventures.

Southern farmers have this advantage at present, that they have no experimental tests to make, and those who propose to engage in dairying have only to see that the soils from which they intend to gather food for their cows are suitable for the fodder to be grown. Everything in the matter of food-tests, selection of breeds, care of stock, chemical processes and handling of products has already been done by the various State associations, and the experimental farms are now engaged in educating experts to operate the creameries and cheese fac-

\*SEED FORMULA FOR PERMANENT PASTURE.—Three to five pounds per acre white cloverseed; two bushels (twenty-eight pounds) Kentucky blue-grass seed; one bushel Bermuda seed; or, sow rhonpe<sup>1</sup> roots raked from the gardens.—*From Bulletin of Experiment Farm at Raleigh, North Carolina.*



tories which are sure to start up presently. The kindergarten lessons have been learned, bulletins of information have been widely distributed, and those who wish to profit thereby have only to "read and they will know."

It is hardly five years since cheese factories were introduced into Canada, and already Canadian cheese has a world-wide reputation. Butter-making has become a popular and universal industry throughout the Dominion, notwithstanding the rigor of the climate requires that cows shall be hand-fed for six months in the year. A uniform method of manufacture has resulted in a nearly uniform quality of product; and with the improvement, prices have advanced. Co-operative separator creameries have been generally adopted. Provinces which formerly were far behind are now nearly abreast of the foremost, and those which were ahead have all been gainers by the general improvement. The number and quality of cattle has increased. Multiplied herds of swine are fed on the skim-milk, and the lands are protected from exhaustion by returning to the soil the elements of fertility in the shape of manure, instead of shipping away its essential constituents in bulk year after year. In Minnesota, Wisconsin, Iowa, Massachusetts, Vermont, Illinois and Ohio the results are even more marked. The butter product of Minnesota for 1895 from creameries alone was 28,000,000 pounds, of which 20,000,000 pounds went out of the State, at an average price of twenty cents per pound, yielding the handsome revenue of \$4,000,000. The product of the home dairies is estimated to be equal to that of the creameries. The grand total is large, but not as large as that of Denmark, for instance, a country only one-fourth as large as Minnesota, which exported \$26,000,000 worth of butter in 1894.

Minnesota has attained her present pre-eminence as a dairy State in twelve years. Her first premium exhibits were shown at the New Orleans Cotton Exposition in 1884-5.

It is estimated that a 400-cow

creamery is worth \$40,000 a year to the community in which it is located. Scores of poor and impoverished communities in New England, known as "abandoned towns," could be mentioned which have been made independent and thrifty in five years by the location of creameries among them and the restoration of the old fields. Pastures which wouldn't support one starveling sheep to the acre now produce three tons of herds-grass and timothy. Fine Holsteins and Jerseys have supplanted the scrub cattle. The sight is beautiful!

That intelligent dairying is a profitable business needs no argument. Demonstrated results are more convincing than words. Signal success has attended the creamery experiments lately started in East Tennessee. The South has a great advantage over the North in climate and cheapness of feeding. Cattle do not require to be fed for more than three months in the year. Where failures have occurred they are due to an insufficient number of cows, or because the creameries were owned by individuals who did not pay enough for cream to make it an object for farmers to patronize them. But wherever separator creameries have been established on the co-operative plan, in localities where there are a sufficient number of cows within a radius of four miles, they have in every instance secured highly satisfactory results. Four or five miles is about as far as milk can profitably be hauled. If less than 300 cows are secured, it is difficult to make the project a success. Jerseys are the best for butter, and Holsteins-Frieslands for greatest flow of milk. Mention is made of a cow belonging to the Minnesota Experiment Station, which yielded 10,287 pounds of milk in a year! A cow belonging to a Mr. Knupp, of Glencoe, earned \$9.43 in July, \$12.60 in August, \$12.56 in September, \$13.93 in October—making a total for the four months of \$48.52. These are impressive facts which the thoughtful farmer will consider. Another consideration in dairy husbandry is that the whole family, male and



female, find steady employment, each member contributing to the success of all.

To have good butter and cheese, good milk must be used. It should contain no less than 3 per cent. of butter-fat. The last annual State inspection for Minnesota showed an average per centage of 3.63, which is a higher grade than has been reported by any other State. A person nowadays, in selling his milk to the cheese factories or creameries, gets what his milk is worth in fats, which is found to be the only just way of dealing in this commodity, and insuring fairness to all patrons.

Some native cows are as good as thoroughbreds, if they are only cared for properly. Buying a thoroughbred does not insure any more milk, unless one is a good judge of her qualities, which in some bloods are as "ornary" as in the poorest scrub. The cost of keeping a cow depends on how much she is fed. By weighing each kind of food used, and ascertaining the cost of the same per pound, an estimate of expense can be made. Expert dairymen of Norfolk, Va., usually feed equal weights of bran and corn meal, with two pounds of cottonseed meal, adding ground oats sometimes. Statistics show that of all the animals subjected during the last eight or nine years to public test at milking trials, those which were over six years old gave from 20 to 25 per cent. richer milk than those under that age and the same per cent. more milk.

Persons going into the dairy business should endeavor to obtain special purpose cows. They should look for cows that are large milkers, and which can be readily fattened when their yield of milk falls below a remunerative quantity. But if butter is the object, then the quality of the milk is more important than the quantity.

No dairy should be without pigs to consume the skim-milk, and no herd of cows should carry too many dead heads.

The favorite plan for operating and maintaining cheese factories is to have a central curing-room in each county,

with auxiliary branches in each adjacent township, or wherever a large enough quota of cows can be secured to furnish requisite milk; each of these branches to be fitted with suitable apparatus for making green cheese, which would be hauled once or twice a week to the main factory to be cured and boxed, preparatory to shipment for market. The cost of these auxiliaries, with outfit, ought not to exceed \$200 apiece. By having one factory in each township or hamlet, each farmer could bring in his own milk, and as to the care of this milk and the making of the cheese, there are plenty of boys and girls who would be quite capable of attending to it.

Another plan of operation is to have the farmers of a district all turn their cows into a common herd, and at the end of the season, after all expenses for labor, etc., are paid, to divide the balance among the several owners of the cows.

The best plan to organize a co-operative creamery is to call a preliminary meeting and obtain the presence of all farmers possible within a radius of six to ten miles, and after having some well-informed person explain to them the advantages of such an enterprise, have each one sign an agreement pledging himself to join the organization and supply milk from a specified number of cows. When 300 cows are thus pledged, organize these signers into a creamery association under the established law of the State, after which it is expedient to advertise for plans, specifications and prices, and contract for a substantial, well-equipped plant, with the best apparatus and with a capacity in accordance with future prospects.

A creamery of a capacity of 20,000 pounds of milk daily will cost about \$2800. To raise this amount, borrow the money, if it cannot be raised by stock subscriptions. There is hardly a community anywhere in which someone cannot be found to loan that amount to an association of twenty-five or more reputable farmers, each one of whom agrees to be personally responsible for the loan, or

his share of it. To pay off the loan, retain five cents on each 100 pounds of milk received at the creamery to form a sinking fund, and in a year and one-half or two years a 400-cow creamery would be clear of debt and no one would feel the tax. Such a plan, by providing cash at the outset, enables the association to buy materials for their plant to the best advantage.

As soon as competent and acceptable officers and operators have been selected to take charge of the factory or creamery, all should meet together to receive practical lessons every day for a month from a competent instructor, or until they all become fitted to carry on the work properly. Afterwards, during the busy season, occasional visits would be made by the instructors to see that the work is correctly performed. Each farmer would turn in his milk to the factory, take a daily receipt for same, and at the end of each-week be given a certificate somewhat as follows:

Factory No. —

Certificate for week ending —, 1895. This is to certify that John Jones has delivered in good condition — pounds of milk, the same having been made into cheese and delivered at the central curing room at —.

Signed, —,

Cheese-Maker Factory No. —.

Now, it is obvious that these certificates would be readily accepted by storekeepers in lieu of cash, for they are virtually the same as cash, since

they are eventually redeemed at the factory or creamery treasury for their face value. Goods could be sold quite as cheap as for currency, and merchants and farmers would both prefer this system to carrying book accounts for a year. At least this is the way it works in Minnesota. It effectually disposes of the creamery question for that particular section.

Dairying is a compensating system. It returns to the earth continuously what it extracts from it. It keeps the cosmic circulation in order. It is the cardiac valve which pumps the energy through the industrial economy, and returns it with health and strength to be disseminated again and again. There is no danger for generations to come of producing a surplus of fine butter. It is altogether improbable that the supply will exceed the demand for it at profitable prices, for cows cannot be bred fast enough to produce such a quantity of butter as this would require, since, with the reduction of the cost that will follow increased production, consumption will increase very rapidly, until the whole people will use butter not only on their bread, but on all kinds of meats, potatoes, and in all kinds of cookery, it taking the place of all other kinds of fats, as it possesses better qualities than any of them do or can.

The South offers superlative inducements for practical creamery or dairymen to locate among us and instruct and co-operate with our people.



## WEST VIRGINIA'S ATTRACTIONS AND ADVANTAGES.

*By Ernest B. Morris.*

The general impression of West Virginia is that it is mainly a coal-mining, timber and oil State, covered with forests, in which possibly a few Indians may yet be found, and inhabited mainly by a few pioneers, occupying log cabins. It is true that West Virginia's coal area is one and one-half times larger than that of Great Britain, consisting of nearly 17,000 square miles of the best coal for all purposes known to the world, which it is estimated will yield fully 100,000,000,000 tons of merchantable coal, or enough to supply the United States, at the present rate of consumption, for the next thousand years. And it is true that about two-thirds of the area of the State is covered with forests of hemlock, white pine, poplar, white oak, walnut, cherry, maple, etc. It is also true that one of the largest bodies of hardwood in the United States is still virtually untouched, and that the oil belt extends 200 miles across the State, yielding a product worth near \$200,000,000 annually, giving employment to hundreds of men at good wages, to say nothing of iron ores, which are found in inexhaustible quantities.

West Virginia is "coming out of the woods" more rapidly than any other State in the Union, as official statistics will prove.

The latest report of the State Mine Inspector, issued in 1894, shows that at that time 11,110 inside miners and nearly 6000 outside laborers and coke workers were employed in and about the coal mines of the State, which in that year produced 10,928,820 tons of coal and 1,090,809 tons of coke.

There are no official statistics of the lumber industry at hand, but there are nearly, if not quite, as many people

employed in that branch of business as in coal mining.

The State's population in 1870 was 442,014, and, according to an estimate made by Governor McCorkle, the present population is 875,000—an increase of nearly 98 per cent. in twenty-five years, which has not been equalled by any State east of the Mississippi river, except Florida. Of that number, 93 per cent. are native-born whites,  $4\frac{1}{2}$  per cent. colored and  $2\frac{1}{2}$  per cent. foreign-born whites.

The number of persons to a family is 5.43, which is only exceeded in the United States by Texas and Virginia, and the death-rate is less than 1 per cent.

In educational and human institutions, the progressive spirit of her citizens may be seen to the best advantage. The reports show a higher expenditure per capita for education in West Virginia than in Pennsylvania and many of the other older States.

In addition to the natural resources of West Virginia, which are enough to make a nation wealthy and powerful, its agricultural interests are very important and compare favorably, when measured in dollars and cents, with any other State. With altitudes varying from 400 to 4,680 feet, giving a climatic range of  $14^{\circ}$ , with every variety of land and soil within the confines of the State, its crops are naturally of wide variety.

The mean annual precipitation is 46.9 inches, and the mean temperature for January is  $35^{\circ}$ , and for July  $74^{\circ}$ .

The soil is adapted to the production of nearly all varieties of grains, fruits and vegetables.

Corn is the principal crop, and new ground and river bottoms will yield



on an average seventy-five bushels of shelled corn to the acre, worth fifty cents per bushel. In some localities as much as 160 bushels have been raised, while in a few places the lands will not yield over twenty bushels. Wheat will yield from fifteen to twenty-five bushels to the acre, and always finds a ready market at home at five to ten cents per bushel over Western wheat. Oats grow well on almost any land, and, as a rule, yield about thirty-five bushels to the acre. In the Cheat mountain country fifty bushels is a common yield.

The mountain lands are particularly well suited to the growth of buckwheat, which requires but little attention, and ripens rapidly and yields about twenty-five bushels to the acre. The flour made from it is of the best, and sells at three to five cents per pound.

Sugar-cane is largely grown in many counties for the manufacture of sorghum molasses. A good crop is 300 gallons to the acre. In a number of counties maple syrup is made in large quantities; it usually brings \$1 per gallon.

Another crop well adapted to the mountain soil is tobacco, which is the principal product in certain portions of the State.

Potatoes do well in nearly every part of the State, and yield from 300 to 400 bushels to the acre, rarely worth less than forty cents a bushel, and very often bringing \$1.

Vegetables grow in abundance, much attention being paid to raising cabbage, turnips, tomatoes, celery, beets, and the like.

Apples, peaches, pears, plums, cherries, quinces, as well as strawberries, raspberries and grapes, are admirably suited to this State and are produced in large quantities, one county alone having shipped 1,500,000 pounds of dried apples to Germany this season.

A resident of Clarksburg has a vacant lot in the suburbs containing about one-half an acre, which he planted in strawberries and raspberries, and last summer sold from it

600 quarts of strawberries at twelve and one-half cents per quart, and 250 gallons of raspberries at forty cents per gallon.

The mines and lumber camps afford a good cash market for nearly all of the farm products, giving us a home market, with better prices, than are paid in many of the cities for everything raised on our farms.

As a grazing State, West Virginia cannot be excelled. Ex-Governor A. B. Fleming, in a speech made while he was governor, said: "Kentucky is called 'the blue-grass State,' and it is generally believed that blue grass nowhere else abounds as in Kentucky. I would not detract from our neighbor, or seek to diminish the just pride every Kentuckian feels in that which has made his State famous, but I assert upon information and belief that there are more acres of blue-grass sod in West Virginia than there are in Kentucky. It is the predominant grass, though not our chief reliance. Clover flourishes everywhere, timothy grows in rank luxuriance on our limestone and other soils, while on our light lands orchard and mixed grasses come almost as a special gift from Providence, affording an excellent hay and abundant pasturage. Thus the entire State is particularly adapted to stock-raising, which affords a most delightful and usually a most profitable pursuit to our land-owners. West Virginia's live stock, horses, cattle and sheep, command the highest prices; her wool is at the top of the market, and her dairy products are sought after by those of the most epicurean tastes."

The State is splendidly watered, great streams of purest water flowing through nearly all the counties keep fresh and green the pasture lands. The excellent grass, the pure, fresh air and sparkling water are conditions unexcelled for raising stock, and this should become one of the greatest stock-raising States in the Union.

Harrison county, of which Clarksburg is the county seat, is the leading stock-raising county of the State, having, according to the auditor's report,



2000 more horses, 6000 more cattle and over \$100,000 more value in farm products than any other county in West Virginia, while its taxable land value, excluding buildings, is \$815,000 more than that of any other county.

An idea of our proximity to the markets may be had from the fact that Clarksburg, a central point in the State, is only about one-half day's ride to Washington, Baltimore, Cincinnati or Pittsburg.

Governor Wm. A. McCorkle, in

his inaugural address, delivered March 4, 1893, said: "The great area and richness of our coal and hardwood timber, in both of which we are first in this great country; the production of coke, in which we are second and soon will be first; the great development of railroads, in which last year we were first in the United States; our splendid soil, equitable climate and good school system, all offer unparalleled inducements to incoming citizens."

## THE STEADY IMPROVEMENT OF AGRICULTURAL CONDITIONS SOUTH.

*By Dunbar Rowland.\**

The Southern cotton planter is confronted with the so-called cotton problem as it exists today, and its solution carries with it the well-being and prosperity of the cotton belt. It is my purpose to discuss industrial conditions here from knowledge gained from the cotton farmers themselves, not from elaborate bulletins prepared by New York bankers. Before entering upon a description of the agricultural system now in operation in the South, it may help to set matters in a clearer light if we take just enough of a backward view to enable us to appreciate and understand present conditions. Farming is an industry for the production of animal and vegetable products, and to be successful it must be conducted on business principles and according to practical methods. Farming in the South has been carried on in a very unscientific way for the past twenty-five years. At the close of the war the Southern planter found himself confronted with a state of affairs that was new and novel to him. He had been accustomed to have entire control of human will and actions; he had reduced his farming operations to a system, and that system rested on the profits derived from crops gathered from the fields and

from the far greater profits to be derived from the increase in the value of slave property. It is a mistaken idea to suppose for a moment that the great agricultural wealth of the South previous to 1860 was dug from the ground in the shape of agricultural products. Immediately after the war the growth of cotton was unnaturally stimulated, and the same process has been going on for the past twenty-five years. The planters are largely responsible for that themselves, and the merchants and business men of the country have aided and abetted the farmers in devoting their entire time and attention to the growth of cotton at the expense of every other agricultural product. Thirty years ago cotton was worth \$1 per pound. This enormous price set the farmers of the cotton-growing belt wild. The farmer could afford to devote every acre of his land to the cultivation of cotton at such prices. He could afford to buy corn, wool, meal, flour, molasses, and, in fact, all the foodstuffs that his family and his stock consumed, and pay for it in cotton at \$1 per pound. The crop was raised on the most expensive scale, economy was lost sight of, and there was a mad rush among the farmers of the South to see

\*From Memphis Commercial Appeal.



who could make the greatest number of bales of cotton. It was at that time that the system of growing nothing but cotton, and buying all foodstuffs took firm hold on the South, and that system has been one of the causes that has brought about the present low price of cotton. A few far-sighted, intelligent farmers have always made their own foodstuffs on their own farms; and these men have been invariably successful in their farming operations. The results obtained from such a scientific diversification of crops should be an object-lesson for Southern agriculturists, for it is in that system that the future prosperity of the South lies. The time has come for a readjustment of all values, and this is especially true of all agricultural products. All products of the field and farm are low, and it cannot be expected that cotton will bring a good price when all food products are low. The Southern farmer must make up his mind to bid farewell to high-priced cotton. Ten-cent cotton has gone, never to return, and the sooner the farmers of the country realize that fact, the better it will be for them. The question naturally arises, How is the planter to meet these low prices and make a living? Is he to decrease his acreage? Is he to stop growing cotton? By no means. Let him grow more cotton than ever, but at the same time let him reduce the cost of production by following an intelligent system of diversified farming. Let him raise all his foodstuffs at home, and then he will have his cotton as a surplus crop, and he can make money by growing cotton at five cents per pound. The Southern farmer must raise the necessities of life on his own farm, and when he does that he will have solved the problem of how to improve his condition. When the Southern planter recognizes the inflexible logic of the situation, the cotton problem will be solved for all time, and prosperity will return. To make any business enterprise a success the expenses necessary to run that business must be reduced to the lowest possible limit. To make a success

of farming crops must be made on the most economical basis possible, and when the Southern planter gets that idea firmly fixed in his mind he will make money raising cotton. The present agricultural depression is not due to over-production of cotton, but it was directly brought about by spending too much to make the cotton and place it on the market. Suppose that cotton is worth five cents per pound in the markets of the world—it is possible for the farmer to raise and market his cotton at two and one-half cents per pound; but he gets it ready for market at a cost of four and one-half cents per pound. It will be seen at once that such a system could only end in one way, and that would be inevitable ruin and failure. The planter cannot grow too much cotton if he follows a system of diversified farming and makes it his surplus crop. The more he makes and gathers the better it will be for him. No matter how low the price goes, if he has a living out of his other crops, the money he gets for his cotton will be so much surplus, so much clear money to his credit. The system of agriculture that depends for its success upon one crop alone will be a failure, no matter what that crop is or where it is raised. The present low price of cotton will revolutionize the system of agriculture in the South, and it will compel cotton-planters to make their crops on a cheaper basis. Can this be done? Can the South compete with the world in raising cotton? We can make cotton here in the South cheaper and better than any other country on the globe. We have the labor to make it on a cheap basis and it can be done. But aside from the low price of cotton, the South is in a better condition than she has been since the war, and the cotton crop will bring as much as it did last year.

The farmers of the South have been very prudent in buying; they have only bought what they could pay for, and this falling off of the demands of the farmers upon the merchants is one of the most hopeful signs of the times. It means that the farmers of the South



have made up their minds to live at home; to grow their foodstuffs on their own farms, and to stop the ruinous course of looking to the merchants for their supplies. The South is in a better condition today than it has been for thirty years. The farmer is more independent than he has been for a score of years. The debts that the farmers owe were contracted more than five years ago, when they were wedded to the system of raising cotton to pay for everything used on the farm. A habit has grown up in the country of complaining and railing about hard times, and that feeling will depress any section of country, and have a bad effect on its industries. Why should agriculture be depressed this year of all others? The most remarkable crops have been made that ever delighted the eyes of the farmer, and the planters owe less than they did when cotton was selling at ten cents per pound. The farmers of the South have diversified their crops this year more than ever before, and they are in better condition than the Western farmer who sold his wheat crop at fifty cents per bushel.

It is true that cotton is the money crop of the South, but the latest government statistics show that the value of the grain crops grown in the South far exceed in value the cotton crop. It is a well-known fact that the South can grow a greater variety of crops than any other section of the country. Almost everything that grows under the sun can be grown right here. The South is the best hay-growing section in the United States. The Northern and Western farmers are satisfied if they can make five tons of hay per acre. Here in the South ten tons can be made from native grasses without cultivation. The South is the best stock-raising section in the Union. In the North and West, stock have to be housed and fed seven months in the year; in the South they are housed and fed throughout the year on the open pasture. The lands of the South cannot be surpassed in fertility and fruitfulness by the valley of the Nile. The Yazoo Delta of Mississippi is the finest

cotton-growing section in the world, and that section can produce 5,000,000 bales alone if all the land was in cultivation. The finest and best timber in the world is today standing in the Southern forests, and the possible developments of the future along this line cannot be estimated. The growth of early vegetables for Northern markets is becoming a money-making industry in the South, and in the future truck farming will occupy the attention of farmers. With such conditions surrounding the people of the South, how can they become grumblers and pessimists? The cry of hard times has become chronic with certain classes. It is heard on every hand, it is seen in every face and it is brushed up against in every business transaction. If there is one section of the Union that has been blessed with abundant harvests, it is the South. The barns and storehouses of Southern farmers are bursting with corn, their pens are filled with fat hogs and evidences of plenty are seen on every hand. There is more corn, potatoes, peas, cotton seed and sorghum in the South this year than there has been in any other year of its history. Another great drawback that has delayed and retarded the agricultural development of the South is the ruinous credit system that has kept the farmers constantly in debt. That system is rapidly falling away. The farmers see that they cannot pay credit prices for what they need and make a living. The country is going practically on a cash basis now, and another year will see the credit system wiped out of existence. The fall of the credit system will cause the farmer to be more prudent in his purchases; he will not spend so much when he has to go down into his pocket and pay cash for everything he buys. The growth of cotton manufactories in the South will help to solve the cotton problem. When the time comes for the South to manufacture into cotton goods the cotton raised in its fields, then will come a time of unexampled prosperity for Southern industries and Southern farming. The growth of



the manufacture of cotton goods in the South is wonderful. It has, in round numbers, 3,000,000 spindles, with a capital of \$100,000,000 invested. The Southern mills are controlling the coarse cotton goods trade, and they are rapidly forging to the front and competing with New England in finer cotton goods.

If any painstaking, intelligent man will compare the present condition of Southern agriculture with what it was fifteen years ago, he will find a change for the better all along the line. There are many indications now pointing to a still greater improvement in the future than there has been in the past. New methods are being introduced, new theories are being advanced, and there is a spirit of inquiry existing among farmers that goes to show that they are seeking for better things. The farmer no longer despises what he calls book farming; he has opened his eyes to the fact that a knowledge of science as applied to agriculture is necessary to the successful operation of his farm. Practical men no longer sneer at the experiments being carried on at the experimental stations all over the South; they are now seeking after the bulletins sent out by these stations, and they are gaining practical advantages from these experiments in farming. A better knowledge of soils, of food necessary for plants, of drainage, fertilizing and other important matters of farm economy are receiving more attention every day. The farmer is beginning to understand that he must know

something of agricultural chemistry, something of botany and other practical sciences if he would be successful in his chosen calling. A more intensive system of farming is gradually making its way among the farmers of the South. They realize that they have been attempting to cultivate too much land, and have done so at the expense of the proper preparation of the soil for planting. Farmers will in the future cultivate less land and cultivate it better; they will pay more attention to drainage, fertilizing and the saving of manure than they have done in the past. Fertilizing is now receiving more attention, and it will build up the waste places of the South as nothing else will. It is by the adoption of scientific methods that the Southern farmer is to work out his industrial salvation. Combinations and syndicates composed of farmers banded together for the purpose of controlling the price of cotton are fruitless and foolish, and such schemes are only the dreams of visionary enthusiasts. The condition of the South is better than any other portion of the country. She has stood the financial depression much better than the North and West. While the Western farmer is dissatisfied, and is selling out and leaving his home, the Southern farmer is surrounded with an abundance of agricultural products, and he is filled with hope for the future. A new era is dawning for the Southern farmer, and he has only to reach forth his hand to claim its benefits.

## SOME SOUTHERN OPPORTUNITIES.

*By James R. Randall.*

About two miles from Augusta, on the Savannah river, is the Goodale plantation, which has been a famous place since the beginning of the century. It was alternately owned by the Fitzsimons, the Hampton and the Miller families. For a number of years it has been in possession of Mr. H. H. Hickman, president of the celebrated Graniteville mills, of South Carolina, whose dividends are large, reserves ample and stock above par. Mr. George O. Walker, an expert and energetic planter, manages this place. There is one field of about 100 acres on this great estate that can produce without manure about 10,000 bushels of corn; but unfortunately, in too many cases annually, this magnificent crop has been ruined partially or wholly by inundation. It occurred to Mr. Hickman and Mr. Walker that sugar-cane might be profitably substituted for corn. The requisite information was procured by the writer from Senator Caffery, of Louisiana. He substantially said: "The water that ruins or injures corn in the Georgia river swamp will not hurt cane. I would prefer that the water should be kept out, but the brief submergence such as you mention will not affect the cane. Frost does not hurt it either, and windrowing mitigates even freezes, which rarely come before harvest time in November. I should think that great cane crops might be raised and gathered on the Savannah river plantations, and that sugar and molasses production, according to circumstances, would pay. At any rate, you ordinarily lose your swamp corn, and can save your swamp cane. There is no better forage for fattening stock, especially hogs, than sugar-cane ground up in the ordinary fashion."

Major S. A. Jonas, who has done so

much for agriculture, politics and everything else valuable in Mississippi, said in effect: "I think well of the Georgia swamp cane culture. Never was there a better time for experiment. There will never more be free sugar legislation in this country. Cuba will be crippled for a long time. Besides, as Senator Caffery says, and as the Louisiana planters have found out, at a saving of many thousands of dollars, the foodstuff of cane is immense. In Louisiana, mules are fed upon molasses. In our town of Aberdeen one gentleman fattens about 1000 head of cattle habitually, and his food is molasses at eight cents a gallon and cottonseed meal. We dilute the molasses at the rate of one gallon to two gallons of water, and then spray it over or mix with meal. The cattle 'lick the platter clean,' and no doubt, if gifted with articulate language would, like Oliver Twist or the average schoolboy, ask for more."

As the News and Courier, with characteristic enterprise, which has been so valuable to South Carolina hygienically, agriculturally and economically, is just now debating the horse and mule question with a correspondent, the writer asked Major Jonas what he thought about it. He answered:

"I would advise South Carolina to imitate Mississippi, if she can. We had a great advantage, in my section of the State, of living alongside of or in close proximity to the Illinois Central and Kansas City & Birmingham railways. Poverty and protracted drouths among farmers of the Northwest compelled them to part with many thousands of their horses, most of them being of fine blood from splendid imported or domestic thoroughbred stock. Horses became cheap—



in many Western parts too cheap for anything but killing and canning. But vast droves came southward to the only market where, as happened this year, farmers had money to purchase bargains. And they got them. What our farmers chiefly wanted were mares for breeding purposes, as well as use. As Mississippi has become a great grazing country, she is preparing also to become a great horse, mule and cattle grower, not only to maintain a home supply, but a surplus for sale abroad. Instead of deploring the advent of Western horses, South Carolina should, if of a business turn, avail herself of the Western animals, at a bargain, and prepare, as Mississippi has done, to turn the advantage to account for future usufruct. She cannot raise horses and mules sufficiently without the stock, and Providence has delivered that into her hands. At least that has been the case in Mississippi."

If the Savannah valley shall become a sure and great sugar-cane producer,

instead of periodical corn-loser, the problem will be solved profitably for many people, and lands will rise in value millions of dollars. Along with cane culture, the possibilities of stock-raising are shown to be most flattering.

I will watch these experiments, if made by Messrs. Hickman, Walker and others, with great interest, and I trust that magnificent success awaits this new departure in the Savannah river swamp, which, when furnished with artesian water, easily and cheaply procured, is one of the healthiest places in the world, as it is one of the most fertile.

The conditions of sugar-cane planting are more particularly treated of in connection with the Savannah river plantations, because the movement originated there in its present shape experimentally. No doubt what is supposed to be true of the Georgia river bottoms is relatively true of those in portions of Alabama and, of course, South Carolina.





# THE SOUTHERN STATES.

## THE SOUTHERN STATES.

AN ILLUSTRATED MONTHLY MAGAZINE  
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The SOUTHERN STATES is an exponent of the Immigration and Real Estate Interests and general advancement of the South, and a journal of accurate and comprehensive information about Southern resources and progress.

Its purpose is to set forth accurately and conservatively from month to month the reasons why the South is, for the farmer, the settler, the home seeker, the investor, incomparably the most attractive section of this country.

### Value of Southern Agricultural Products

The Bulletin of the United States Department of Agriculture, giving the principal crops of the country for 1895, presents some very interesting statistics which should be carefully studied by all who want to understand something of the advantages of this section for diversified farming as compared with other sections.

The grain, hay and Irish potato crops for 1895 in the South were as follows:

	Bushels.	Value.
Corn .....	608,665,017	\$204,140,452
Wheat .....	44,760,361	29,379,611
Oats .....	87,338,230	28,435,360
Rye .....	2,412,070	1,437,791
Barley .....	200,174	91,556
Buckwheat .....	452,204	252,665
Irish potatoes....	20,786,782	9,738,965
Hay .....	*4,689,282	48,027,531

\*Tons.

The South gives more attention to the production of sweet potatoes than Irish, but as the Agricultural Department has not compiled any record of the sweet potato crop, we are unable to give the figures of that.

These statistics show the magnitude of the grain crops of the South. The total production of grain for 1895 in that section was 747,600,000 bushels. Contrary to the supposition of many farmers in the North and West, who do not understand the extent and variety of the South's diversified farming, its production of hay was 4,600,000 tons, valued at \$48,000,000, and this notwithstanding the fact that owing to the open winter season the length of time which live-stock can graze is very much greater than in other sections, and hence the amount of hay cut is comparatively small when contrasted with the consumption of grass in the open field by live-stock. The total value of the cotton, rice, sugar, tobacco, fruit and other productions not included in the above table, added to these figures, makes an aggregate value of all Southern farm products for 1895 of over \$800,000,000.

One of the most interesting features of the crop reports is exhibited by working out a comparison of the relative value of farm products in the South and in other sections. According to this the average value to the farmers of the South of corn for the year was thirty-four cents a bushel; in the remainder of the country the average was twenty-three cents a bushel. Thus the Southern farmers received on an average eleven cents a bushel more for their corn than the Western farmers. The average value of wheat was sixty-six cents in the

South and forty-nine cents in the remainder of the country, showing a difference in favor of the Southern farmers during the year of an average of seventeen cents a bushel. Oats were worth to the Southern farmers an average of thirty-two cents a bushel, and to the farmers of other sections eighteen cents, a difference of fourteen cents a bushel in favor of the former. Potatoes yielded to Southern farmers an average of forty-six cents a bushel for the year, and to the farmers of other sections twenty-five cents a bushel, the difference in this case being nearly 50 per cent. The South's hay crop was worth to its producers an average of \$10.24 a ton, and the hay crop of other sections an average of \$8.14 a ton, or a difference of \$2.10 a ton in favor of the South.

Thus the Southern farmers not only have the advantage of a lower cost of living by reason of the ease and cheapness with which they can raise their own foodstuffs for their families, because of the low cost of clothing and the small supply of fuel needed, but they also have an advantage in the selling price of their productions of from 20 to 50 per cent. higher value than the Western farmers. Their nearness to the consuming markets of the country and the cheapness with which their products can reach the seaboard and the large cities of the East give an enhanced value to their productions as compared with the agricultural products of the West. Moreover, the rapid growth of manufacturing interests in the South, which is fast extending the home consumption of farm crops, must result in maintaining this very material difference in favor of the Southern farmer.

### **Sugar.**

The vast impetus recently given to the production of cotton goods and other manufactured articles in the South, which has, until recent years, had the reputation of being almost exclusively an agricultural section, has had the momentary effect of

withdrawing the attention of the community from what was at one time the only manufacturing industry of any magnitude in the lower tier of States—the production of sugar.

It has taken thirty years of peace since the turmoil of the sixties to bring the cotton mills to the cotton-fields, whereas the sugar planter, even in the ante-bellum days of easy satisfaction, erected his sugar mill just as close to his cane-field as it was possible to get it, and then grumbled because he had to haul his cane across the expanse of his own demesne. That he was driven to this by the uncouth bulk and weight of his cane, as contrasted to the light and compressible nature of cotton, is undoubtedly true, yet it is a matter of more than usual significance that he was not at all discouraged by the grave conditions with which he was thus confronted, but pursued at once a line of policy which is now being inaugurated in the cotton industry with such marked success.

The school of adversity, once graduated from, confers a diploma which is an "open sesame" to most of the boulders strewing the path of human existence, and thus the sugar planter, early educated to combat opposition, to surmount difficulties, and to extricate himself from precarious situations, is now emerging at least temporarily victorious from one of the severest ordeals to which any industry was ever subjected—an ordeal all the more severe because he was in a measure deprived of sympathy, and his misfortunes generally looked on as being either merited or fictitious. The end of the grinding season of 1894-95 found him in a deplorable situation. Stimulated by a bounty, the defects or virtues of which will not be here discussed, he had expanded his operations to the fullest possible extent, spending not only all his available cash, but all the additional funds that his credit would enable him to borrow, on the improve-



ment of his apparatus and the extension of his domains.

On the crop of 1894-95 no bounty proved to be forthcoming, and although a special appropriation was passed to cover a portion of it at the last session of Congress, nothing has yet been actually paid, owing to the obstacle interposed by the comptroller of the treasury, Mr. Bowler. In addition to this totally unexpected deprivation, the prices for sugar on the world's markets last year showed an unprecedentedly low range of values, and this unfortunate combination of circumstances left the sugar industry of the United States prostrate and helpless, encumbered with debts and on the verge of complete extinction.

It is questionable if there is any other class of men in the world today who could have looked misfortune in the face so boldly as did the sugar planters of the South at the close of that disastrous campaign. It is questionable if any other class of men ever so universally and systematically borrowed enormous sums and then found their anticipated means of payment swept out of existence. And yet he who travels through Louisiana today will find the canefields alive with the busy panoply of toil, will hear the hum of industry, and will see the people with their shoulders to the wheel, determined to retrieve, in such measure as they may, the losses they have undergone.

Just as by the wise dispensation of nature sunshine follows the shower, so have the people in the sugar belt been encouraged this year by a marked and gratifying increase in the price of their product, owing to the destroyed crop of Cuba and the comparatively short output of the European beet houses. Prime yellow clarified sugar, that sold last year for less than three cents, is now bringing four and one-quarter cents, and the naturally hopeful disposition of the sugar planters is assisted by something of practical value.

Though still suffering from the ruinous

losses of 1894-95 in a way that is privately understood and publicly ignored, and though there is scarcely reason to hope that the fair values now prevailing will continue through succeeding seasons unless some adequate protection is afforded the industry, the erection of new sugar-houses is being pushed forward, the installation of additional and improved apparatus fills the country side with the clang of steel, and the rich alluvial soil reels off long, clean furrows from the keen edge of the plow. Hundreds of small farmers are growing cane for the central factories, and it is on these that the future of the industry must rest. The days of the manorial system, beautiful in itself, but incompatible with present conditions, are drawing to a close, and the destiny of sugar, whether good or ill, bears with it the fortunes of the many instead of the few.

### **The Importance of Advertising.**

A few months ago the Messenger printed an editorial on the subject of dividing some of the unused lands in this county by the large landholders and advertising them. This article was copied in the "Southern States" magazine, which has a wide circulation in the South and is seen and read by a good many Westerners who contemplate moving to the South.

Last week we received a letter from a gentleman from Nebraska, who is now in North Carolina looking out for land. He said he had seen the article in the "Southern States," and wrote to us asking for information concerning the county, its population, schools, churches, etc. He wanted to know if this was a good place for him to act as real estate agent in selling lands to Westerners. He said there was wonderful unrest in the West, and that many people are looking out for a better place to which to emigrate. This gentleman's letter was answered by the editor and by two other citizens, and the editor has received a card in reply saying that the gentleman wanted to come to Christiansburg to look about for himself, and would likely come in April. —Christiansburg (Va.) Messenger.

This merely goes to show the value of

publicity through the "Southern States." Southern land owners or agents, railroad companies and all others who want to reach the people of the North and West who contemplate coming South find that the "Southern States" is an invaluable advertising medium.

### **The Importance of Good Locations for Settlers.**

The Journal, of Fort Payne, Ala., referring to the great movement of population to the Fitzgerald (Ga.) locality, seeks very wisely to impress upon the South the importance of striving to locate the incoming settlers who are crowding into this section in attractive and desirable regions. The Journal very rightly says:

"Of course, everybody is glad to see good farmers and others from the North and Northwest come into our Southern States, and, of course, everyone accords to them a hearty welcome. But something more is desired than to see them come and settle. We want to see them prosper after they become settled. One man who comes down and betters his condition and prospers in his undertakings is better than ten who make failures, lose all they brought and go back to abuse the country and its people."

It is hardly necessary to emphasize the importance of this advice. The people of the South cannot afford to see any deception practiced in drawing population to undesirable localities. Upon the good health and the success of the thousands who are now coming to the South must necessarily depend to a considerable extent the magnitude of immigration for some years. It is inevitable that there will be some dissatisfied settlers. We can never hope in this world to find a locality where there are not some cranks and not some failures, but earnest and persistent efforts must be made by railroads, who have so much at stake, to see that land agents operating along their line seek to secure the best locations, and not simply the localities where land can be bought at the lowest price.

And yet as true as all this is, one cannot study the South and what has been accomplished without sometimes doubting all of his own preconceived notions as to the best and most favorable locations for settlers. About eight or ten years ago, when an effort was made to attract Northern people to the Southern Pines locality, in North Carolina, it called forth very general criticism. The officers of the railroad were opposed to the work, believing that the locality was absolutely unfitted for outside people. The writer, with the very best light that he could get on the subject, and nearly every paper in North Carolina, opposed the work that was being done and criticised it as liable to prove a failure, to mislead the people who settled in that region and of great disadvantage to the whole South. As is generally known, the Southern Pines territory at that time presented simply a barren, sandy region in which nothing but pine seemed to grow. That district looked to the traveler as though there was no possible hope for its ever being improved or ever being anything but a dreary waste of sandy land. There was one man, however, who had faith in the work, faith in the climate, faith in the possibilities of this sandy region producing fruits, and so year after year, against the protestations of many of the best people of North Carolina, he kept on untiringly working in his own way and going contrary to all the advice given by the newspapers, which had at heart the best interests of the South. A few years ago, however, it was recognized that this man had been wiser than his critics, and the press and public were compelled to admit that Southern Pines was a success. It is needless to recount the very remarkable attention which that territory has been attracting for several years, the success of grape and peach growing, the delight of the several thousand Northern people who have settled there because of its climate and the recent wonderful development which is being made by



a Boston man, who has already spent since last June over \$1,000,000 in laying out a few miles away a town, in building a hotel and in constructing dwellings for rent, with all modern improvements, designed to meet the needs of people who may desire comfortable accommodations in a climate such as Southern Pines enjoys.

In some South Georgia districts where but a few years ago there was little outlook for any improvement or any advancement in the agricultural interests, a most wonderful success has attended the growing of fruits, and that section promises to take

rank with California as a fruit-producing region. Like the Southern Pines territory, its success has been contrary to the expectations of all who had long regarded it as forever destined to be but a poor and unattractive wire grass section.

There are many other places throughout the South where the same conditions have prevailed, and where facts have set aside the preconceived notions of people who thought they understood the climate and soil of those regions, but this does not lessen the importance of great care in selecting land for colonization purposes.



# IMMIGRATION NOTES.

## 1600 Letters a Week From Prospective Settlers.

It is doubtful if any section of any country ever commanded such universal attention as the South is now attracting. Farmers, merchants, manufacturers and capitalists of the North and West are seeking for information about the South in a way to indicate something of the marvelous change which is destined to come about by this great movement of population southward.

During the past twelve months the Southern Railway Co. has been doing some progressive work in presenting to the people of the North and West the attractions of the country tributary to that system. One of its methods has, of course, been by advertising in the "Southern States." Mr. M. V. Richards, of Washington, the land and immigration agent of the Southern Railway, in an interview with the "Southern States," says that he is receiving an average of over 1600 letters a week from people inquiring about the South. These letters come from all parts of the North and West, and from farmers, all classes of people, from merchants and manufacturers, from rich and poor, all seeking information about the most attractive points of the South for location. There are hundreds also from people who are anxious to get away from the Northwest on account of its climate, and who want to know more of the genial, healthy, invigorating climate of this section.

A prominent business man of a little New England town, in talking of this feature of the southward movement a few days ago, stated to the "Southern States" that a year or two ago an invalid from his town settled in a spot in North Carolina which had attracted his attention because of its excellent climate, and as a result of his satisfaction with his new home some twelve or fifteen people from that one little town had already settled in that one place. None of them are what could be classed as invalids, but all were men anxious to get away from the

rigors of the winter climate of Northern New England, and anxious to build homes in a section which possesses so many advantages as the South.

## Delighted With Western Carolina.

The Herald, of Morganton, N. C., following the good work of the "Southern States" in publishing from time to time letters from Northern and Western people who have settled in the South and who are anxious to tell the world of the attractions which this section presents to them, gives in a recent issue a number of letters from former residents of Michigan, Illinois, New Jersey, New York, Pennsylvania and other States, stating their impressions of the region around Morganton. As illustrating the strong hold which the South takes upon the people from other sections who settle there, we take the following extracts from the letters in the Herald:

Col. C. R. Miller, of Adrian, Mich., says: "The region about Morganton is fertile; anything that grows North grows there; the people friendly, frank and cordial. I advise people who are going South to locate farms and expect to stay there to pay a visit to Burke county, North Carolina."

Mr. C. W. Pursell, a lumber dealer of Washington C. H., Ohio, says: "Your climate is free from malaria, the air pure and bracing, soil good and produces well. I prefer that part of North Carolina to any place I know of in the South."

Mr. Geo. O. Baker, assistant engineer, General Electric Co., Schenectady, N. Y., says: "I have never found a climate as equable and salubrious as that of North Carolina. The fact that I have invested money in Morganton and induced my brother to make it his home will attest the sincerity of what I have written."

Mr. John Brook Leavitt, of the law firm of Leavitt, Wood & Keith, 111 Broadway, New York, who spent two summers in Morganton, says: "Your beautiful county I often recall, and the kindness and hospi-



talities with which I was everywhere met made a great impression on me. Your county ought to attract the best kind of emigrants who want to locate either in a town or upon farming lands."

Mr. Serrill Douglass, of Bristol, Pa., in speaking of Morgantown, says: "With an altitude of 1200 feet above sea-level, you can claim the finest climate to be found anywhere. The people are refined, intelligent and the most hospitable I ever met with."

Mrs. T. W. Marchant, of Washington C. H., Ohio, who spent the spring of '95 in Morgantown, says: "Anyone contemplating a home could not but be pleased with Morgantown. It has all that could be desired in climate—its people generous, progressive and prosperous."

### Italian Agriculturists.

Mr. C. E. Sessions, of Coahoma, Miss., has some twenty-five families of Italian immigrants on his lands, with whom, as laborers, he claims to be well satisfied. He has been using this class of labor for about ten years, increasing it annually. He says that the Italians rent land and never fail to meet their obligations promptly. They raise everything for home consumption. Mr. Sessions considers the natives of Tuscany very desirable for our farming interests, as that is largely an agricultural country. Mr. Austin Corbin, of New York, lately located about 550 of these people on his Sunnyside plantation, Chicot county, Arkansas, and Mr. Corbin's nephew, writing to Mr. Sessions, states that he is very well pleased with them as laborers, and that by their thrift and enterprise they are setting a good example to the people among whom they have located.

### Growing Alarmed.

People from the cold, bleak and barren Northwest for the past two years have been coming South in search of a warmer climate, richer soil, more equable seasons and better conditions. This movement, which began soon after the great drought in Nebraska, Kansas, the Dakotas and other States, which brought suffering and ruin to thousands, has swollen gradually from a small stream into a most formidable tide. It has now become so great as to cause alarm among larger property-owners

in those States, which are being depleted, and an effort to stem the tide has been begun, as the following communication to the Chicago Times-Herald indicates:

"The attempt on the part of the railroads centering in Chicago to boom the Southern and Southeastern States and to populate them at the expense of the Northwestern States, with the recent extensive publication of this fact by the Times-Herald, has aroused the people in the latter region to a realization of the situation and stirred them to action. In Minnesota and Iowa a counter scheme is being agitated for holding to their population, while in South Dakota the people have already made a move.

"An 'immigration convention' has just been concluded at Mitchell, S. D., which was attended by several hundred of the most prominent people of the State, including Governor Sheldon. The South Dakota Immigration Association was organized. An executive committee was appointed, composed of one member from each judicial district, with an auxiliary committee made up of one man from each county.

"This committee was instructed to prepare forthwith advertising matter to be distributed throughout the East, telling the truth about South Dakota's resources. Emphasis was laid on the matter of telling the exact truth, and to insure this a committee of prominent men will edit the advertising material before it is printed. The convention decided that boomers heretofore had done more harm than good by claiming for South Dakota all of the good things under the sun. The advertising matter to be sent out will tell where the region of never-failing crops is; the part of the State where a little capital will pay for irrigating tracts which by artificial watering will invariably produce abundant crops. Men interested in stock-raising will be told of the portion of the State where nutritious grasses cover vast ranges, and the facts about the limitless mineral wealth of the Black Hills will be set forth for the benefit of those interested in mining."

No better evidence than this is necessary to show how great has become the Southern movement. It cannot be stemmed, either. Those who have come South have found a veritable Eden for the agriculturist and settler and have written back to their



friends, who are likewise coming in great numbers.—Birmingham Age-Herald.

### **Southern Immigration.**

The next great movement of population that the world is to witness will be southward. The conditions are now all favorable. It has required a quarter of a century since the war to bring about the changes that were necessary to make the South a thoroughly attractive country for Northern and Western farmers. All the questions relating to possible race troubles had to be settled; the prejudices engendered on both sides by the war had to die out, and the fact that the South could produce other things than cotton had to be demonstrated. The construction, after the war, of railroads through the West and Northwest by the aid of enormous land grants made it absolutely necessary that these roads, controlled as they were by the leading financial powers of Europe and America, should bend their energies and unite the influences of all the financial forces concentrated in them to turn population westward. The South was in no condition to invite immigration, even if it had been in its power to accomplish anything against such a combination of forces as were at work in behalf of the West.

But a great change has come and all the disadvantages under which the South has labored are being removed. During the last five or ten years there have settled here and there all over the South a few Northern and Western farmers, whose great success is now being made known to all their friends in their former homes. This is awakening a direct interest in the South in all parts of the West—an interest such as could be aroused in no other way.

From every section of the North, the West and Northwest, and even from California, requests for information about the South and its advantages for settlers are being received. Items of news from several thousand Southern towns and villages from Maryland to Texas pass before the writer every day. The most striking feature in this mass of news—so pronounced that it would impress itself even upon the most casual reader—is the number of settlers reported from day to day as locating in the South.

This is entirely a new thing. A year ago

items of this kind were rare. Now every issue of every Southern paper has something in it about immigration matters and the incoming of new people, and even now thousands of Western and Northern farmers are settling in the South.—Richard H. Edmonds, in *The Chautauquan* for March.

### **An Alabama Colonization Enterprise.**

Arrangements are being made for the purchase of 8000 acres of land near Anniston, Ala., for colonization purposes. Mr. W. G. Ledbetter, of Anniston; Mr. R. L. Spencer, of Fruithurst, Ala., and others are interested. In an interview with the *Hot Blast* Mr. Spencer said:

"We commenced the cultivation of grapes in Tallapoosa two years ago last August, and after one year's development of the interests there, in which about 5000 acres of land was sold and 2000 acres planted, a new company was organized, known as the Alabama Fruit Growing and Winery Association, which purchased 2000 acres in Cleburne county, Alabama, and the new town of Fruithurst was established on the latter property less than a year ago. Since the first of May over 600 10-acre tracts, or 6000 acres, of this land have been sold. On this more than 400 people have been located and 100 residences built. The company has erected a fine hotel, established planing mills, graded streets, etc., at a cost of about \$25,000. The new company has on its payroll upwards of 500 men, and the pay-roll amounts to from \$8000 to \$12,000 per month.

"The company has done a business since last May of about \$250,000, has paid two dividends of 25 per cent. each and has a surplus of between \$50,000 and \$75,000 available for future dividends. The business of the Southern Railway has increased so rapidly at Fruithurst that it is now the third best station on the line between Atlanta and Birmingham, paying the Southern Railway Co. between \$1500 and \$2000 monthly.

"Tracts of land have been sold and are now being planted from two to three and one-half miles from the centre of the city. The cash receipts from sales of tracts of land alone for the month of February have been \$15,000, aggregating sales for probably double this amount."

Mr. Spencer was asked to outline the intentions of himself and associates as to the



Anniston enterprise, and replied very interestingly as follows:

"It is the intention of the promoters of the Fruithurst enterprise to operate a similar enterprise on the lands about Anniston; to locate here a different class of people from that at Fruithurst; that is, a certain class of Northern people, who, while they possess an abundance of means, are looking for Southern homes and desire to locate at some point where they can enjoy the finest educational and church facilities and devote their idle time to the fascinating and profitable occupation of grape-culture.

"While the people that the association located at Fruithurst are thrifty Swedes, Germans and Americans, excellent citizens, with a reasonable amount of means, the enterprise is attracting men with large means, who, of course, cannot find at Fruithurst the facilities for educating their children they would like. It is proposed to supply this demand with the Anniston proposition. It is furthermore intended to locate here a class of thrifty Scandinavians, Germans and Americans, who, while not wealthy, as the world goes, have still an abundance of means to purchase their vineyards and with the aid of employment, part of the time to be given by the new company and any work they can secure with the factories of Anniston, being skillful mechanics, will make them a successful and desirable addition to the citizenship of any community. Thus it will be seen that the enterprise at Fruithurst and the proposed enterprise at Anniston will not in any way clash, that the tendency will be to assist each other as a certain class of Northern people that are brought to Fruithurst will be located here, and still another class will prefer the Fruithurst enterprise to the one at Anniston for the reason that the lands there will be somewhat cheaper than those surrounding the city limits here.

"It is proposed to organize and colonize the Anniston department of the enterprise entirely independent of the Fruithurst enterprise, and excursions of Scandinavians, Germans, etc., will be brought to this point by an entirely new set of sub-agents, working under the supervision of the general agents.

"The Fruithurst syndicate will undertake the colonization of these lands at prices ranging from \$400 to \$800 per 10-acre tracts

with two acres planted to grapes and the profits arising from these sales will be divided into dividends at the expiration of each six months.

"There will be no salaries in connection with the company except the secretary and treasurer, who will answer correspondence and do the clerical work of the company. Taking past experience as a basis, there should be no difficulty in selling 1000 acres of these lands every six months.

"At Fruithurst said Mr. Spencer, we have demonstrated not only that the plan of colonizing is a feasible one, but that the colonists located are successful. The grapes will grow luxuriantly and produce abundantly in this section, and the advantage of two railroads insures fine shipping facilities here.

"I don't believe in cheap lands and salubrious climate as the only arguments in inducing Northern people to come South. We do not encourage parties to buy and locate who have not at least \$300 for a single man and \$600 for a married man, and we have made this a rule at Fruithurst, as at least one-half of the business is what might be termed investment, where Northern people purchase tracts for vineyards of the association, send the money to plant them and to take care of them, the latter harvesting the grapes and returning the net profits to the owner.

"We have located at Fruithurst during the last year nearly 500 people, which represents only about one-fourth of our sales; but my impression is that with the advantage in many ways of this location we could equal or perhaps exceed that record; but it is a false impression that population is the only thing that is wanted. As a matter of fact, we discourage people of smaller means from locating on their vineyards until they are bearing, as we prefer to have the company care for the vineyards for two years before the purchaser locates, and at that time the vineyard will furnish him support. This, of course, applies only to purchasers of small means, but it is probable that purchasers of vineyards about Anniston would be considered people 'well-to-do,' who would put residences on their vineyards or in the city and make this their home; so it is very probable that a larger proportion of those purchasing vineyards here would lo-



cate in Anniston than we have had thus far at Fruithurst.

"A great advantage of an enterprise of this character for any section is that through its extensive advertising it attracts large numbers of people who do not desire to purchase vineyards. I presume that at Tallapoosa and Fruithurst there are now fully 100 families who are living there for the winter and did not come to purchase vineyards, but were attracted to the places as desirable points for spending the winter, and are living there either in hotels or private residences. These people, of course, have means, and leave a great deal of money in the towns."

### Population Moving Southward.

There is increasing activity in the purchase of Southern farm lands for colonization purposes. The interest which has been aroused throughout the country in the extensive colonization work in and around Fitzgerald, Ga., has caused great activity in that territory, and along the line of the Georgia & Alabama Railroad and the Abbeville & Way Cross branch of that system arrangements are being made for very large settlements. A dispatch to the "Southern States" states that the sale of 10,000 acres of land in the vicinity of Forest Glen, a point on the Abbeville & Way Cross branch of the Georgia & Alabama Railroad eight miles from Abbeville, Ga., has been completed, titles examined and executed and the purchase money paid, and surveys are now being made for division and allotments of farms are being proceeded with. Arrangements have been completed for locating on this property between 300 and 400 families, and they will begin to arrive as soon as the surveys of the land have advanced sufficiently far to divide up the tracts. The topography of the land, the healthfulness of the locality, the soil, the natural timber growth, the adaptability for miscellaneous crops, the establishment of orchards, fruit farms, vineyards, etc., and the proximity of the entire tract to the Georgia & Alabama Railroad, render this purchase an extremely desirable location for Western settlers.

The same dispatch states that other colony locations along this line, embracing still larger areas of land, are assuming satisfactory shape towards completion and set-

tlement, and final contracts for these properties will probably be closed within a few weeks.

Mr. W. G. Ledbetter, of Anniston, Ala., and some associates connected with the Alabama Fruit Growing and Vinery Association, of Fruithurst, have purchased 8000 acres of land adjacent to and near Anniston, and will colonize it with Scandinavian and German grape-growers. The organization will be known as the Anniston Homestead and Fruit Growing Association, and will be capitalized at \$150,000. It is stated that the company will begin planting vineyards within the next ten days, and that the foreign agency organization of the Alabama Fruit Growing and Vinery Association, which has for some time been in operation at Fruithurst, will be used to bring immigrants to this property.

In other parts of the South contracts are being made for large purchases of land for similar work, and every day seems to add strength to the movement of population southward.

Major G. W. McGinnis, the assistant land commissioner of the Yazoo & Mississippi Valley Railroad, a part of the Illinois Central system, in an interview with the Memphis Commercial-Appeal, said: "The movement of people from the Northwest to lands in the Delta and the actual sales of a year ago did not amount to 10 per cent. of what they do now. The increase is simply marvelous, and I am delighted with the class of men and women who are coming. They represent the advancement of agriculture in the great States of the Northwest, and they will make citizens such as every section of our country should have. To give you an idea of what the movement is, I may say that within the past sixty or seventy days we have sold about 12,000 acres of land, and the purchases will not average 160 acres each, thus showing how many buyers there are. In other words, the sale of these 12,000 acres means the coming of at least 125 families into the Delta from the Northwest."

Mr. J. E. Fulton, of California, president of the Wyoming, Salt Lake & California Railroad, is reported to have secured an immense tract of land on the Rio Grande river, above Brownsville, Texas, which he



will cut up into small farms on which to locate agriculturists. It is said that he will erect a large reservoir in the vicinity of the land for irrigating purposes, following the California system of irrigation, the water being carried to the land through an extensive system of ditches.

Mr. Harris Strong, of West Point, Miss., is reported to have located a large colony of Germans on several thousand acres of land about four miles south of West Point. The colonists expect to plant most of the land in strawberries and fruits, the land being rich and conveniently located for shipping.

Some Iowa families, who bought land near Duncan, Miss., last fall, have moved down and are reported working vigorously to establish themselves in their new homes. They claim that they are the advance guard of hundreds of families from their former home.

A party of Western men recently purchased 10,000 acres of land in Hinds county, Mississippi, near Jackson, which will be divided up into tracts of twenty acres each to be colonized with truckers and fruit-growers.

It is thought probable that Alabama will soon have a colony of substantial and industrious Northwestern people, similar to that of Fitzgerald, Ga. Mr. F. W. Keith, of Chicago, under the guidance of Messrs. C. P. Atmore and P. Sid. Jones, of the Louisville & Nashville Railroad, has lately been investigating for a site. Mr. Keith claimed to be looking for a large tract of agricultural lands, probably between Montgomery and Mobile, for the purpose of settling a colony of good farmers from the Northwest.

Mr. C. Erickson, a prominent Scandinavian citizen of Minnehaha county, South Dakota, with a companion, has been investigating the farm lands of North Alabama. They represent six farmers of Northwestern Iowa and South Dakota, who have entered into a signed agreement to purchase at least 1000 acres of land to locate upon, and propose to place also 2000 acres or more under option for about twenty-five

other families in their localities who want to obtain homes in the South.

It is said that thrifty farmers from Dakota and Michigan and other Northwestern States, who have settled in Athens, Ala., are to be seen on the streets every day. They express themselves as delighted with the climate and soil, and say that hundreds of immigrants will move into their neighborhood as soon as houses can be prepared for them.

The settlement at Fruithurst, in Cleburne county, Alabama, is reported to have been quite successful, and is attracting a good deal of attention. It is estimated that the colony will be increased by at least 100 settlers in the near future.

Mr. M. V. Richards, land and immigration agent of the Southern Railway, has effected arrangements for settling a colony of Bohemian agriculturists between Birmingham and Anniston. They will engage in general farming and fruit-growing.

State Senator W. D. Chipley, of Pensacola, Fla., has returned home from his trip to Sweden, the object of which was to arrange for bringing to Florida a large colony of Swedes. In speaking of the matter Colonel Chipley said: "If I am not disappointed beyond all human calculations, I have arranged to bring over 100 families from Sweden to Florida next fall. An examination has already been made by a committee of Swedes, who came to Florida for the purpose of investigating the country. They were highly pleased."

Mr. F. W. Luschefske, of Hamburg, Germany, was in Grove City, Fla., recently for the purpose of investigating the neighborhood with a view to finding a suitable location for a large colony of German farmers. He claimed to be very favorably impressed with the section.

The Messrs. Schofield Bros., of Chicago, having spent two winters in the vicinity of Valdosta, Ga., are said to have decided to make Lowndes county their permanent home, and will establish a large stock farm in the southern portion of the county. They propose to stock the farm after the

approved Western manner, with blooded cattle, sheep, hogs and horses.

Messrs. Palmer Bros., of South Dakota, are reported to have purchased from Mr. O. T. Hopper, of Boston, Ga., his country home of Oakridge, near that town. It is said that the Palmer Bros. propose to settle a colony from South Dakota on these and adjoining lands.

Blue Ridge, Ga., was recently visited by Messrs. Holden and Durpee, working under the direction of a colonization bureau of New York city, who wish to secure 50,000 acres of land in the neighborhood of Blue Ridge for a Scandinavian colony.

Mr. Michael McQuaid, of Chicago, a prominent man in public affairs in that city, contemplates making his home in Wilkes county, Georgia, and he has stated that if he does so it will only be the entering wedge of a large colony of thrifty, capable and industrious people.

Messrs. O. L. Winks and Ezra McClafflin, of Williamsport, Ind., have purchased a fine tract of land consisting of 6000 acres in Clinch county, Georgia, on the S. V. & W. R. R., and they intend locating a small colony of Indiana farmers and fruit-growers on the land during the summer and autumn. The land is cleared of all heavy timber, and is well situated as to the railroad facilities.

Col. J. B. Killebrew, immigration agent of the Nashville, Chattanooga & St. Louis Railway, lately received a letter from a very prominent gentleman in central Ohio stating that he was just on the eve of departure for the purpose of selecting a site for a co-operative colonization scheme. The gentleman wrote: "Nothing can compare with our system. We can get and will take only the best people." After we return from the South and settle on the location for this colony I will then take the lecture field. I can assure you I shall have crowded houses. We are now receiving letters of inquiry and applications for membership from every part of the United States. Many of them come from California. We will surprise the people of the South as soon as

we are ready to begin operations. I have been suppressing everything and keeping it from the press until we are ready to locate. Our committee now is nearly ready to leave for the South. We shall take a first-class photographer with us, and I shall use the views when I am lecturing, and also use them in our printed matter. I have had much to do with colonization in the West, and we are going about this in a business-like way."

It is reported that the Italian colonists at Sunnyside, Chicot county, Arkansas, will be recruited by about forty families to come from the neighborhood of Genoa, Italy. The newcomers will increase the colony to something over 1000 persons.

Mr. Howard Cole, of Houston, Texas, representing a syndicate organized by Houston, Dallas and Fort Worth people, recently purchased 100 acres in the western suburbs of Shreveport, La. It is stated that the property will be subdivided into lots, streets and sidewalks laid, and an electric car line built. The outlook for prosperity and improvements in Shreveport is considered very encouraging.

Another real-estate deal in Shreveport consists of 200 acres of land at the head of Wallace Lake, known as the old Redding Place. This was purchased from Mr. J. Henry Shepherd by Mr. Charles Schaary, a German, late of New Mexico, who is a practical farmer and intends to work his land with the latest improved farming implements.

Hon. Hiram C. Wheeler, of Odebolt, Iowa, one of the heavy corn growers of that State, having last year cultivated 4000 acres in corn and 2500 in oats, has been prospecting in Houston, Texas, with a view to making investments. He was accompanied by Mr. John Stevenson, of Odebolt, and Dr. C. B. Boardman, of Des Moines, Iowa. This is the second visit of these gentlemen to Texas. In an interview they admitted that very few in the Northwest have any conception of the almost boundless resources of this State.



# GENERAL NOTES.

## **A Southern Exposition in Chicago.**

At a meeting held in Chicago lately it was decided to hold in that city next summer a Southern exposition in which it is planned to make a comprehensive display of the South's mineral, timber and agricultural resources. Mr. Richard H. Edmonds, editor of the *Manufacturers' Record*, being unable to accept an invitation to be present, sent a letter, from which we take the following extracts:

"I am profoundly appreciative of the opportunity which the holding of a Southern exposition in Chicago affords, to draw the business interests of the South and the West into closer connection.

"I am sure that the more the business men of the West study the importance of developing trade relations with the South, the more deeply will they be interested in this great question. A period of wonderful prosperity and progress is before the South. Of this there can be no question. It is simply whether the West shall be identified with the South in the development of its vast material resources, and thus secure a share in the prosperity which this will bring about, or whether this section shall be left to work out its own advancement and up-building in connection with what is being done by the East.

"The *Manufacturers' Record*, as the general industrial exponent of the entire South, has for years labored to impress upon the West the importance of closer business relations with the Southern States. In the great territory south of Mason and Dixon's line there is latent wealth enough to enrich an empire. Upon no other country on which the sun shines has nature lavished its gifts more abundantly. Here, and nowhere else on earth, are found in the same region the four great foundation elements of nearly all manufacturing—coal, iron, cotton and timber; and added to these, agricultural capabilities which guarantee that this section when well populated will yield of agricul-

tural products a greater total than the entire country now does. In this great territory, covering over 500,000,000 acres of land, there are found elements of wealth which can only be realized by those who have fully studied the situation. New England, importing its cotton from the South, its coal from the South, its iron and its timber and its foodstuffs, has built up its vast manufacturing interests until in cotton mills alone it has nearly \$400,000,000 invested. Pennsylvania, with coal and iron as the foundation, has developed an industrial life the magnitude of which amazes everyone who studies the subject. That one State has nearly \$300,000,000 more capital invested in manufacturing than the entire fourteen Southern States, based mainly on coal and iron, while Alabama alone has more coal and more iron and ten times as much standing timber as the State of Pennsylvania. West Virginia has 17,000 square miles of coal, against 10,000 square miles in Pennsylvania. Even Great Britain has only 12,000 square miles of coal, or 5000 square miles less than the one State of West Virginia.

"In order to free itself from dependence upon this country, Great Britain has made the most strenuous efforts to encourage the cultivation of cotton in Egypt and India; but the South's supreme monopoly in this industry was never stronger than it is today. While other countries, after thirty years of Great Britain's work in the encouragement of cotton production, have made but little advancement, the South is enormously increasing its yield of cotton and each year lessening the cost of production. It now produces nearly three-fourths of the world's cotton crop, but at the present time has only about 5 per cent. of the cotton spindles of the world. It has in operation 3,000,000 spindles, and the mills now under construction will require for equipment about 1,000,000 spindles in addition, while in the world there are upwards of 85,000,000



spindles. Here is a field for expansion which will tax the investment of capital and the building of mills to the utmost for many years to come before the South begins to manufacture at home one-half of the cotton which it produces. In years past the profits on manufacturing were sufficiently large to justify the shipment of raw materials a thousand miles or more and the reshipment of the finished goods to even more distant markets. New England and Great Britain could afford to transport their raw cotton from 1000 to 3000 miles, turn it into the finished product and find a market throughout the world. What was true of cotton manufacturing was equally true of nearly all other lines of industry.

"Of recent years, however, economic changes beyond the control of man have lessened the margin of profit and thus forced the manufacturer to seek the point of lowest cost of production. That country or that section which has to haul its raw materials a long distance has necessarily reached the limit of its growth. The iron trade of England years ago ceased to advance, having made no material increase in the last twelve or fifteen years, and so in cotton the limit of progress in Great Britain has long since been reached. To a large extent this is true of New England. That section lost its iron business when Pennsylvania and the West developed their iron-making industries based on the proximity of the raw materials. In its textile interests it has almost ceased to manufacture the lower grades of goods, and while for a few years the manufacture of the higher grades may be left to that section, the time is inevitably coming when the South, with its unequalled combination of advantages, will produce the finer goods as well as the coarser. In this vast industry the world now has about \$2,000,000,000 of capital invested.

"The census reports show that over one-half of the standing timber of the United States is in the South. Of coal and iron there is practically no limit. Under such conditions it is difficult to forecast the future of this section. It may, however, be worth while to glance briefly at what has already been done since the South, just recovering from the effect of the most disastrous war in the world's history, undertook without capital and under the most discouraging cir-

cumstances to rebuild its ruined fortunes. It is but a little more than ten years since the South commenced to emerge from the disastrous results of the war and the period of reconstruction which followed. Discredited in this country and abroad, with few friends and with hundreds of thousands of its best people forced to seek an opening for their energy in other sections, it took up a task such as has rarely fallen to the lot of any country. What it has done is but a faint indication of what it will do.

"Twelve years ago the South made 500,000 tons of pig iron; it is now producing iron at the rate of 40,000 tons a week, or 2,000,000 tons a year. Ten years ago it had \$30,000,000 invested in cotton mills; it now has \$110,000,000 invested in mills, and \$15,000,000 more being added by the mills now under construction. It was then producing 10,000,000 tons of coal a year; it is now producing upwards of 30,000,000 tons a year. It then had less than 25,000 miles of railroad, and it now has over 45,000 miles. Its total agricultural and manufactured products in 1880 amounted to about \$1,200,000,000 a year; the aggregate now is over \$2,000,000,000 a year, and rapidly increasing. This section is turning out at the present time of agricultural and manufactured products nearly \$800,000,000 a year more than it was then, and it is a safe assertion to say that ten years hence the agricultural and manufactured products of the South will be at the rate of \$4,000,000,000 a year.

"These facts may illustrate something of the future of that section to which Chicago is now beginning to turn its attention. Here is a field for the employment of energy and capital such as even the West in its palmiest days scarcely offered to the energy and enterprise of the people of this country. Here is a field of unequalled opportunities. Here is a country of virgin resources—a country with mild and equable climate, with an even temperature and rainfall, with great rivers affording transportation to the seacoast, and with magnificent harbors which open to the commerce of the world the most direct lines for reaching the markets of the world. It is an opportunity great enough and broad enough to claim the attention of the foremost business men of the mighty city of the West. The Manufacturers' Record rejoices to know that Chicago is awakening to the possibilities of this vast region.



and that it has determined to secure its share of the wealth which must be created by the upbuilding of a region of such infinite resources."

### **Why He Didn't Go Further.**

An example of what Northern men can do and are doing in the Southern country is furnished by Mr. J. R. Logie, of New York. In December, 1894, Mr. Logie, who is a retired merchant, started for Florida for the benefit of his health. His ticket allowed him to stop off on the way, and one place where he exercised this privilege was in Charlotte, N. C. He was so well pleased with the locality that he went no further, but purchased about 650 acres of land near the city. A reporter of the Charlotte Observer thus tells how he regained his health by becoming a Southern farmer:

"At the outset he hired 200 or 300 hands, and began ditching, canalizing, draining and clearing up. The chief work was the canalizing of Brier creek. The canal is two and one-quarter miles long, twenty feet wide and an average depth of seven feet. It has a fall of forty-six feet three inches, and cost \$7000. Draining the farm into the canal are 16,000 feet of underground piping and 32,000 feet of open ditches. The land drained, Mr. Logie hauled dirt to fill up the low places. He now drives his buggy over places that were last year bogs and quagmires. He cut down 9000 cords of wood, and this naturally left a formidable array of stumps, but these didn't bother him. He got four stump-pullers, and removed the stumps at the rate of twenty to forty larger ones and 300 to 500 small ones per day. Two of the pullers are known as grubbers, and work on the principle of the capstan and drum. The two pullers for the larger stumps are known as the vertical screw power. He piles the stumps in great heaps and burns them.

"Mr. Logie will cultivate this year 300 acres in cotton, forty in wheat, thirty in oats and the balance in corn. When his cotton is laid by he will sow the fields in clover. Across the centre of his farm will be built a roadway, and it will be provided with two water gates. By means of these gates Mr. Logie will be able to flood the upper part of his lowlands from time to time allowing the water to deposit upon them layer after layer of rich sediment. He will

eventually stock his farm with fine blooded cattle. He employs three overseers and from 150 to 200 hands. His largest weekly pay-roll was \$564. His regular weekly pay-roll is \$225. He runs twelve double plows, and has five extra mules for carting. He has a wooded tract of 124 acres, which is to be enclosed for a deer park, and he has already stocked it with pheasants. He has had laid out on the plan of the Tuilleries, but on a small scale, a flower garden, which is in charge of a German gardener. In a circle of fifteen feet he has planted \$109 worth of bulbs. He has a bone mill and cotton gin, and is to put in a temporary saw mill to cut up his great cords of timber. His drainage work is expensive, but it is a success scientifically and practically."

He has the balance of his railroad ticket to Florida, which he keeps as a souvenir.

### **Good Roads for Arkansas.**

The question of good roads is now being agitated in Arkansas, and a good roads convention at Little Rock recently attracted delegates from nearly all parts of the State. Hon. A. C. Millar was selected as chairman. Among those who took an active part in the proceedings were ex-Governor Eagle and Governor Clarke. Resolutions were adopted in favor of a two-mill road and bridge tax throughout the State, and allowing convicts to work on public highways.

### **Distorting the Facts.**

The movement of people from the Northwest to the Southern States has assumed such immense proportions that the railroad companies and persons specially interested in promoting the prosperity of the Northwestern States are becoming anxious for the future of that section, and are doing all they can to check emigration from it. In Nebraska and the Dakotas there has not been an abundant crop for three years, owing to droughts. The crops of 1893 and 1894 were total failures, while that of last year was not much more than an average one. Owing to the large corn crop in other sections last year, the price of that article is very low. Consequently the Northwestern farmers have not received enough from last year's crop to pay their taxes and live. The reason, therefore, why they are seeking homes in the South is apparent. To check



the movement to the South the Northwestern newspapers are printing letters from people in the South who emigrated from the Northwest. All of the letters are intended to show that the conditions in the South for getting a living are not more favorable than they are in the Northwest.

Some of these letters are doubtless genuine. It may be that all of them are. We do not know anything about them. It would not be a difficult matter to find Western people in this part of the South who, for a consideration, would write for Western papers letters intended to discourage people from coming here. Such people do not write intelligently of the country or of the opportunities for acquiring homes. They write of their own experiences, and as they have not succeeded they conclude that nobody else succeeds. But it would be well to inquire whether such people would succeed anywhere. We do not think they would. They are either too indolent to work or they are bad managers. If they were given the finest land in the world they would not succeed in making a living. As a rule, they are the people who are dissatisfied, and who put their letters into the newspapers with the view of deterring others from coming to the South.

But where there is one immigrant who is dissatisfied with the South there are many who are satisfied—so well satisfied, in fact, that they spare no efforts to induce their friends in the North and West to join them. They are industrious and frugal and are succeeding.

The conditions for success that are required in the North are also required in the South, but there are better returns for farmers and capitalists in the South than in the North. Crops are certain, the land is good and the climate is excellent. It is true there are localities in the South where the advantages for making a living are not nearly so great as they are in other sections, and immigrants who locate in those places are likely to be disappointed, and disappointed immigrants lose little time in making their disappointment known. They are likely to do harm to the State or sections of the State in which they reside.

But the few who do not succeed will not check the movement of immigrants to the South. It is pretty well understood that they would not succeed anywhere and that

their failure to succeed is wholly their own misfortune.

The movement of immigrants to the South is not going to stop because the Northwestern railroads want it to stop or because a few of those of the West who have settled in the South write letters to Western papers advising Western people not to come South. The South has advantages over every other section, and the Western people are beginning to discover that it has. With homeseekers and investors, therefore, the South is certain to enjoy an increasing popularity.—Savannah News.

### **Profits in Truck Growing.**

The profits of early vegetable-raising in Florida have been unusually large this year. A grower near Gainesville, Fla., will realize about \$12,000 profit from lettuce alone, so it is estimated. It is calculated that in Alachua county alone \$250,000 will be the profit to truck-growers.

### **Best Opportunities of any Section in the Country.**

Mr. Wm. A. Paine, a prominent banker of Boston, recently made an extended trip through the South, and in reply to a letter from the "Southern States" asking for his views on that section, he wrote as follows:

"In reply to your request for some opinions of mine for publication as to the capabilities and possibilities of the section through which I made my recent trip, will say:

"The best opportunities for observation of the character of the country, etc., were afforded me in traveling through the eastern edge of the Indian Territory, Western Arkansas, Northern Texas and Western Louisiana. Western Arkansas and Eastern Indian Territory is a country almost entirely undeveloped. The land is dry, almost entirely free from swamp, but generally fertile and with the excellent climatic conditions there prevailing capable of a high degree of cultivation and development. The land is rolling, there is plenty of timber, oak, black walnut, etc., is well watered and affords good pasturage all the year round. In my opinion this section offers the best opportunities for new settlers, of any section in the country at the present time. I found also a considerable tide of emigration settling into that section, coming



largely from people who had settled in the West and Northwest, but who had become discouraged by the long winters, the failure of the crops and the low prices of their farm products. In Western Arkansas the farmers are giving up the cultivation of cotton and are having great success in raising potatoes (of which they produce two crops in a year) and other early vegetables for the Chicago and St. Louis market. In Northern Texas, and particularly in Western Louisiana, we passed through some of the finest timber country that could be found anywhere. In Texas the short-leaved pine, and in Louisiana the forests of long-leaved yellow pine, are almost inexhaustible. We found that the men operating in lumber in that section were many of them lumbermen who had formerly operated in Michigan. In my judgment, lumber can be produced very much cheaper there than in any other section of the United States, pine lumber. The only thing needed is opportunity to take it to market.

"In a general way my impressions are that the development so necessary for that country has already begun, and will continue to increase in a remarkable degree in the next five years."

Ralph Peverley, president of the Commercial Wood & Cement Co., of Philadelphia, who was on the same trip, wrote as follows:

"There is no doubt in my mind that there is a large field for capital in that section of the country, and a large amount of capital is quietly going in there to develop it. What with the finest body of timber now standing in this country and the vast quantities of iron and coal, to say nothing of the zinc, chalk and a score of other valuable minerals, with two and three crops per annum from the rich soil, Northern investors hardly realize the richness of the Southern country and the great field there is for capital, if judiciously invested."

#### **Hop Raising in North Carolina.**

Mr. A. L. Jones, formerly a prominent hop-grower of New York State, has made a success of hop-vine yards in North Carolina. He claims that this State is adapted to raising the finest grade of hops that can be raised in the United States. According to his statement, what is known as the E. C. variety, grown in North Carolina, is richest

in lupulin and the strongest of all American hops, and its aroma is pronounced equal to that of the Bohemian, which is the best hop grown in Europe, and one that sells in this country and England for more than double the price paid for New York or Western hops. The cost of establishing and maintaining a hop yard in this State, he claims, is less than for a grape vineyard of like acreage, and not one-fourth of what it is in the hop regions of the North and West.

#### **To Protect Plants From Weather.**

Vegetable and fruit growers in the South will be interested in an invention which, if practical, will be of great value in bringing crops to maturity without injury from the weather. It is termed a plant protector, and is the idea of Mr. George A. Smith, of Atlanta. The protector is made of a translucent water-proof material, and is finished in two shapes—one is that of a cone, and the other of the letter V. By placing the device over beds of early vegetables the plants will be protected from the extreme heat of the sun or from early frosts. As a crop may be damaged to the extent of thousands of dollars by one night's exposure, the value of this idea can be appreciated. Mr. Smith has formed a company at Atlanta to manufacture the protectors.

#### **Milwaukee People to Establish an Industrial School for Negroes in the South.**

A dispatch from Milwaukee says:

"The two big brewing companies of this city have decided to establish several colleges in Tallahatchie county, Miss., where the negro can be given an industrial education and be taught to be a good mechanic. Some time ago these companies, requiring timber for barrels, etc., co-operated in the purchase of a large tract of land in Tallahatchie county, Mississippi. This land was heavily timbered, and not only yielded sufficient lumber for their own purposes, but for a general lumbering business, which they thereupon engaged in. The town of Phillip was started, being named after the Milwaukee man, who has charge of the enterprise, and a railroad was built.

"It is proposed to colonize this land with colored people only. This is considered necessary for the best results to educate colored labor. Schools are to be established by the syndicate. These schools are



to be of an industrial character, and fashioned after the system of Booker Washington's institution at Tuskegee, Ala.

"Washington's interest has already been enlisted in the enterprise. During his recent visit to Milwaukee he learned of the investment of Milwaukee capital in Northern Mississippi, and the plans of the men interested in the promotion of a negro colony there and the practical education of its members. He heartily indorsed the idea, and his suggestions and advice as to the best means of carrying it out were sought. The schools will be built at once."

### **What One Family Made by Moving South.**

Four brothers named Abbott went from one of the Western States to Crowley, La., in 1888. They all had families (comprising over twenty children), and they had among them \$800 in money. They bought a farm on credit and planted it in rice. At such times as they were not needed on the farm they worked at day labor for \$1.25 a day. At the present time (March, 1896,) these four brothers own 3000 acres of land that has an average value of \$30 an acre. They own forty mules, fifty yoke of oxen and a large equipment of reapers, separators, threshers, engines, wagons and other agricultural implements. They have an irrigating canal eleven miles long and eighteen feet wide. They own and operate a big saw-mill plant, and have a rice warehouse of their own 400 feet long. They own a telephone line twelve miles long, connecting their farms, saw mill, warehouse, etc. They are part owners in a rice mill and in the bank at Crowley. They have some obligations, but they have rice on hand and well-secured notes due them, enough to pay all they owe, leaving their land and other properties as a clear aggregate of the profits of their farming operations during the last eight years. They believe that if they had remained in the West they would have been fortunate to have made a living and saved the original \$800. There are many other almost equally noteworthy instances of rapid accumulation of money in this section of Louisiana. Unfortunately, because of the enormous profits in rice-growing, farmers have raised rice exclusively and bought everything else, and have grown extravagant in their farming

methods. This year rice, like all other agricultural products, is selling for much less than it ever brought before, and the growers must either carry their rice over or sell it for less than it has cost—not less than it can be grown for, but less than it has been grown for. This condition, while entailing individual losses and much hardship, will ultimately prove to have been a blessing. It is already having good results. Farmers are taking up the raising of corn, oats, hay, sugar-cane and other crops. They are going largely in hog-raising, for which the country is admirably adapted. Every farmer can support a good drove of hogs on inferior and shattered rice that has heretofore gone to waste. They are taking up in a small way winter vegetable gardening, fruit-growing, etc. Tomatoes, egg plants, cabbage and other vegetables may be brought to maturity almost any month in the year. Furthermore, they are beginning to give attention to the raising of better grades of rice and raising it at a lower cost. They will soon be making as much money as they ever did, and will be in such condition as to be less disastrously affected by any occasional bad year such as the present.

### **A Settlers' Convention.**

A special dispatch to the "Southern States" gives particulars of a Northern and Western settlers' convention which will be held at Southern Pines, N. C., on May 5, to be composed of persons from Northern and Western States and foreign countries who have settled in the Southern States of recent years, the object being to enable leading men from other sections, now living in the South, to express through a public convention their opinion as to the South and its advantages and attractions and the opportunities for people from elsewhere. The governors of the Southern States are taking a deep interest in the matter, and the delegates to the convention will be appointed by the governors, by county commissioners, by mayors of the cities and towns and by presidents of trade organizations throughout the South. Arrangements have also been made to insure a large attendance of representatives from influential journals in the Northern and Western States. Low railroad rates are guaranteed, and special efforts will be made, not only to have the most noted gathering of North-



ern and Western people now living in the South which has ever been held, but also to draw to the convention many people from the North in order that they may fully understand the South as presented by the delegates to the convention. It is expected that this will be one of the most important conventions ever held in the South as regards the influence which its deliberations will have in attracting the widest possible attention to the advantages of this section as told to the world not by Southern people, but by Northern and Western people who have made their homes in the South. Mr. John T. Patrick, of Southern Pines, is arranging the local details for the convention. The "Southern States" would suggest that the Northern visitors be given excursions to noted scenic and industrial points in the Carolinas and Georgia.

#### **Rapid Growth of Vegetables in Southeast Florida.**

To illustrate the rapidity of the growth of vegetables along the southern east coast of Florida, Mr. J. E. Ingraham, land commissioner of the Florida East Coast Railway and the Florida Coast Line Canal & Transportation Co., cites the following instance: During a trip taken over a month ago he ate tomatoes that were taken fresh from new marsh land just south of Lake Worth, that was eighteen inches under water last October. On February 3 Mr. Ingraham visited a muck vegetable farm south of New river, and saw beans and peas in bloom that were planted on January 13, only sixteen days intervening between the planting and blossoming period. Vegetables will be gathered within six weeks of planting. There are many similar instances, as Mr. Ingraham reports that farmers in the Miami and New River country were over a month ago engaged in shipping vegetables from lands that were cleared in December.

In addition to superintending the laying out of the "future city" of Miami, the prospective terminus of the Florida East Coast Railway, and the inspection of farming and fruit lands, Mr. Ingraham selected the site for the town of Modelo, in and about which he expects to locate a large German colony.

Mr. Fred. Maglott, of Ada, Ohio, has bought the large river farm known as "Pip-

sico," near Surry, Va. The farm was owned by Mr. Charles F. Diggs, of Baltimore. It contains 1037 $\frac{1}{4}$  acres, and was sold for \$6500. It is said to have over a mile of river frontage, and is directly opposite the mouth of the Chickahominy river.

#### **A Big Land Purchase.**

Some months ago the "Southern States" referred to the purchase by Mr. W. W. Russell, of Cincinnati, and Mr. A. O. Russell, of the same city, of 115,000 acres of land in Florida lying in Brevard county, on the Indian river. As stated at the time, the purchasers of this property intend to drain it by the construction of a very extensive canal some fifty or sixty miles long, and to open it up to railroad connections by building a railroad from Sebastian, on the Florida East Coast Railway, to the centre of this purchase, a distance of about ten miles.

The Southern Florida Co-operative Fruit Growing Association has been formed to plant a large orange grove, also 100 acres of grape fruit, in the vicinity of Venice, Fla. Hon. L. B. Wombwell, of Tallahassee; S. Powers, of Jacksonville, and James Mott, of Orlando, are interested. The capital is \$50,000.

The reputation of Hancock county, Georgia, for fruit-culture is growing rapidly. Mr. W. N. Coleman, who had 10,000 peach trees in bearing last year, adds 5000 more; Mr. Frank White had 1000, and adds 1800 this spring; Mr. R. H. Moore had 1400, and adds 1800 more. Messrs. J. T. Middlebrooks, T. J. Waller, Hon. Jno. L. Culver, A. S. Long and J. T. Rhodes are planting out thousands of trees. These gentlemen are contiguous to Culverton, and will ship from that point.

Messrs. Miller Bros., packers and dealers in leaf tobacco at Dayton, Ohio, have rented a brick warehouse at Bainbridge, Ga., owned by A. Cohen & Co., and are going to assort and pack therein their purchases of leaf tobacco in Decatur county, Georgia, and Gadsden county, Florida. It is claimed that they have purchased 60,000 pounds of leaf tobacco from farmers.

Messrs. Biggs Bros., of Rocky Ridge, Md., recently purchased from Mr. F. M.



Perry, of Florence, Ala., 1600 acres of land for \$24,000 cash, \$15 an acre. The land is situated eight miles from Florence, in Lauderdale county.

## CORRESPONDENCE.

### The Value of Immigration and How to Secure It.

*Editor Southern States:*

I am always pleased to discuss matters pertaining to immigration, to devise plans for securing immigrants and to convince them that it is to their advantage to settle in the South. The first effort to secure foreign settlers for the South must be directed towards convincing them that this section is better than the North and Northwest; that they will find in the South more advantages and fewer disadvantages than they will have to confront in the Northwest. The American public has long since been convinced of the material gain arising from the inflow of foreign capital and labor. The doctrines of Know-Nothingism, which had such a stronghold in political circles over the entire country and largely developed in some Southern States some thirty years ago, has become thoroughly eradicated. There is no opposition to immigration except of those from one source, the inflow of the Mongolian race, the Chinese and kindred races. There is, of course, a just opposition to the incoming of some of the lower classes of Europeans, just as there would be against criminals from any place. The earnest wish seems to be to secure as many immigrants as possible in the shortest space of time. But there is a difference in the various races, nationalities and individuals. As in the same town or village you find neighbors living side by side, one industrious and the other indolent, so you will find among the immigrants some very excellent people and some worthless. As a general thing, however, none but the workers, who are ambitious to accumulate a property, come to this country. The drones usually remain at home, where, by shifting, they manage to sponge their living out of the community. Then again some nationalities are better than others. From the agricultural districts of England come good grain and live-stock farmers. Very few come from France, as the French have an inordinate love of home and their gay

capital, Paris. They are a frugal people, and the peasants of Normandy and Provence are very skilful vine-growers. The Italians, of whom a large class are coming to this country, monopolize the fruit trade in the cities. They live poorly and are very saving, and as a class do not like farming. Large numbers are very efficient in railroad construction, being competitors in that vocation with the Irish. The Scotch are good farmers and shepherds, very strict in the conduct of life and make valuable citizens. Most of these people, when coming to this country from their old European homes, do so in the anticipation, after having accumulated a fortune here either by profitable labor, legitimate investments or speculation, of returning and under the ancestral roof-tree pass the closing years of life and be buried in the same churchyard with their forefathers. Not so with the Germans and the Scandinavians. From that prolific hive of Northern Europe, for more than a thousand years, swarms have gone forth to every quarter of the globe and become a fixture. When they leave their native country, with their families, they carry their home with them. They expatriate themselves, casting off allegiance to the old, and taking the oath of fealty to the new government. They never expect to return to their old homes, but resolutely determine to build permanent homes for themselves and their children to come after them. It seems to me that the citizen who comes to stay, all else being equal, is the one whose presence will be of most advantage.

All are aware of the fact that the Scandinavians are from Northern Europe. They occupy Norway and Sweden, which form one kingdom, and Denmark, a separate country. The North German people belong to the same race. The Hollanders, too, are of this race, though living for centuries in a country of widely different physical features, and intermarrying with the people of the more Southern countries, they exhibit a marked difference in character and habits. Some men of prominence have become interested in a movement for changing the current of capital and labor from the Northwest to the Southern States because they believe we are at the beginning of a more prosperous era for the South, and because they believe that



the South offers the greatest opportunities to our Scandinavian people. This movement, so quietly inaugurated by a few far-seeing and practical men, is expanding into vast proportions. It was the saying of the distinguished political economist of England, John Stuart Mill, that "there need be no hesitation in affirming that colonization in the present state of the world is the very best affair of business in which the capital of an old and wealthy country can possibly engage."

The need of our Scandinavian people is small farms, averaging from fifty to 160 acres. They will have money to make a reasonable first payment on the purchase and something with which to purchase teams and farming utensils and provisions for living until they can raise a crop. The South's large plantations and vast tracts of uncultivated lands will afford ample measure out of which to farm these miniature farms. I take it that all agree that it is well for the immigrant to come to the South, and if of the right class, that he will be of permanent advantage to the country.

The important question to determine is this: How shall these people be secured? What is necessary to be done to get the European immigrants to come to the Southwest and South instead of going to the Northwest? Here is the country, but the European farmers know little or nothing of the South. What they have been told was by agents of Northwestern railroad companies, who do not hesitate to malign the South and exaggerate in glowing terms the Northwest. They are told that lawlessness and homicide prevail throughout the South, and that a stranger's life is unsafe; that the Southern people comprise two classes, the colored people, formerly slaves, and the white people, who do not labor in the fields, and that European laborers will be treated with indifference. These false impressions must be eradicated by an honest and candid presentation of the truth. The condition of the country must be portrayed in carefully-written pamphlets and circulars. At first a few families will come, and if they succeed, friends and acquaintances will follow. Then from New York, Chicago, St. Louis and all the cities and towns and counties of the Northwest will come many Scandinavians, as well as from various parts of Europe. The great

and populous States of New York, Pennsylvania, Ohio and Illinois possess no superior natural advantages to the Southern States. The accumulation of capital, the multiplication of industries, the establishment of manufactures, the improved cultivation of the soil and the increase of an intelligent, frugal and industrious population create the present difference only. All the conditions of a rapid, healthy and broad expansion of wealth, power and population exist in the South, with the most favorable conditions for utilization. It then rests with the citizens of the South to determine what effort shall be made to secure settlers. The great Northwest, daily and weekly receiving the rich tide of humanity and capital as it has run in an unbroken channel from Europe, is swift in the race and is expanding grandly in each succeeding year. What has been and is being done there may be done in the South with equal prospect of success. But the same system of work to secure the immigration and the inflow of capital must be adopted in the Southern States. The people to come must be sought for in their European homes; at the entry ports where they disembark from shipboard; in the towns, cities and counties of the West and Northwest; in the cold and bleak provinces of Canada; among the hills and mountains of New England and the farming districts of the Middle States. All these people must be invited in no uncertain terms and cordially welcomed to this banquet of plenty. In the South are homes for all who may come. The South has ample room for many million people. To effect this transformation requires patient and persistent and well-directed labor. It will cost much of both time and money and well-directed labor, but it will be a profitable investment.

E. LINDBERG.

New York.

### **Agricultural Development of Arkansas.**

*Editor Southern States:*

Arkansas, and particularly the northwest counties, are receiving a steady, strong and healthy emigration, and of a good class, comprising mostly agriculturists, who purchase lands and proceed promptly with the various and necessary improvements. The major portion is from Kansas, Nebraska, the Dakotas, Iowa, with a good sprinkling



from Minnesota, Wisconsin, Illinois, etc., with some from far-off Wyoming and vicinity. The vigorous and scurrilous attacks on the South in general, and Arkansas in particular, by prominent Northwest journals, in the interest of the great East and West railroads, who have large landed interests in that section, to stem the tide of emigration South and retain it within their borders has had a clearly direct opposite result than that designed, and increased instead of retarding the migration South. It is useless for these papers to longer deny the fact that emigration from the East to the West practically ended, for the present, at least, and emigration and capital are turned South and to the great Southwest in such a strong current that no earthly power can stay the movement. The wornout bloody shirt ceased long ago to wave, and the old war veterans of both contending factions are the earliest to welcome and fraternise even more cordially, if that were possible, than the non-combatants. "We are all Americans," is the motto here. Cultivated lands are held stronger than one year ago, and with a gradual upward tendency plainly manifest, even at this early date. Unimproved lands are in sympathy to a certain degree with the upward tendency. Yet lands are cheap. Improved lands range in value from \$15 to \$150 per acre, the latter for highly improved and well-cared-for orchards in bearing. Wild lands range from \$3 to \$7 per acre, according to location, etc. The prospects are for much higher prices in the near future. With a soil of unsurpassed fertility, little, if any, land but what can be utilized, suited to nearly all crops, but especially adapted to growing of all fruits and vegetables except those of the tropics. A delightful, attractive and healthful climate. The finest of pure clear running streams and springs without number bursting from the hillsides of clear pure cold water. Ample and magnificent timber, comprising a large variety of hard and soft woods, with rich and varied mineral deposits, etc. Free from any State or municipal debt whatever, but lightly taxed, we are well started on the high road to prosperity.

The lumber interests have become an important factor in our trade, and especially so as to our hardwoods, our saw mills being overtaxed and unable at present in many

cases to meet the demand for shipment to the North. In no portion of the United States today is there more activity displayed in the way of railroad construction, new lines building, others being surveyed and lines projected, and this, too, entirely through private enterprise, for the amendment to the State constitution of 1873 absolutely prohibits the bonding or incurrence of debt for any purpose whatsoever by the State, county, municipality, town, except that for school purposes a district may vote a tax not to exceed five mills per annum. The consequence is we are free from debt and our taxes light—in striking contrast in this particular with our sister States to the north and west of us, in many of which the people are burdened by exorbitant taxes and by a stupendous bonded and floating indebtedness.

A new organization was recently formed, and has commenced operations, known as the St. Paul & Galveston Railroad Co., to construct the connecting link between Marshall, Mo., via Sedalia and Springfield to Texarkana, made up of and will absorb lines already built north of Marshall to St. Paul, Minn., and south of Texarkana to Galveston, giving us a deep-water port on the gulf. This line will open up to settlement and development a vast region rich in agricultural, forest and mineral wealth.

With the completion of the Kansas City, Pittsburg & Gulf Railroad about August 1, 1896, to the Sabine Pass on the gulf coast, now in operation to Fort Smith, the head of navigation on the Arkansas river, and being pushed to completion as fast as men and money can do it, St. Paul and the Northwest will have two competing lines through Arkansas to the gulf ports, diverting largely the foreign traffic from and to the present Eastern ports south to the more convenient points on the Gulf of Mexico. The great East and West through lines have already observed the "handwriting on the wall," and have anticipated the result by liberally reducing rates to and from the East and West. We will then occupy an independent position, and be placed in direct connection with the gulf ports, Mexico, Central, South America and West Indies. The leading industry of this, the great Ozark country, is to be the growing of fruits and the utilization of the same in divers ways. Grape culture is now attract-



ing much interest and attention. Wines produced in this (Benton) county were awarded the "sweepstakes" and first prize at the Vienna World's Exposition in 1890. At the World's Fair, Chicago, at New Orleans, at San Francisco, at Philadelphia, and at Atlanta recently we swept the board, and Arkansas was awarded first honors on apples, pears, etc., cotton, corn and many displays of field and garden crops, as well as on samples of flour, ores, timber, native and cultivated grasses, etc.

Austin Corbin, a prominent New York banker, has at his own expense brought 700 Italians, adepts in fruit culture and the production of wines, etc., to this country and located them in the southwest county of this State as a basis for a larger following, and will make the culture of the grape and its products a special feature.

From Holland, Germany and elsewhere have come, are now on the ground and to come representatives seeking for locations for colonies in diversified farming.

Between 1880 and 1890 Arkansas doubled its population, and if an accounting could be had today would, it is estimated, show that we had increased over 50 per cent. from the census of 1890. Arkansas is and will be a country of small farms. Northern farmers are unanimous in the belief that forty acres here, well cultivated, will give better results than any 160 acres in the North.

J. A. C. BLACKBURN.

Rogers, Arkansas.

### Some Questions About Southern Grasses

Mr. C. E. Buek, of Richmond, Va., having asked of our contributor, Col. M. B. Hillyard, some questions regarding grasses, the "Southern States" publishes the correspondence, as these questions and the replies may be of interest to many others:

Richmond, Va., February 10, 1896.

Col. M. B. Hillyard, care of

"Southern States," Baltimore, Md.:

Dear Sir.—I have read with unusual interest all of your articles in the "Southern States," and, as I own over 500 acres of land in a very rich valley in North Georgia, twenty miles below Chattanooga, and being very much impressed with your suggestions to try raising blue grass, I write to ask whether you will not kindly let me know where I can buy books on Southern grasses published by Howard & Phares.

You speak of these on page 97 of the May number. You also on the same page speak of an address delivered by S. M. Tracey, director of the State Experiment Station of Mississippi, which you say ought to be distributed. Could I get one by applying to him, or the publishers elsewhere? I know very little about farming, but have a very intelligent man in charge; but he knows nothing at all about grass, and I would, therefore, thank you to give me the name of any publication in addition to those mentioned above that would give full and explicit directions as to how and when to sow the seed, and all about the preparation and cultivation of the soil. I have splendid limestone ledges and a great deal of shade, and from what you write I am satisfied that it is an ideal place for the successful raising of blue grass. I already have about 100 acres in clover meadows.

You speak of a letter from Col. W. B. Montgomery, written in 1873, as being the veteran Jersey breeder. Is he still in the business, and what is his address? I would like very much to write to him.

On page 96 of the May number you speak of Dr. D. L. Phares having written a book that ought to be in the hands of every man who is thinking of moving South. Where can I get this?

I am under the impression that too much sun will kill blue grass in the South, and that on the other hand it will thrive well without almost any sun at all and in thickly wooded groves. I have, therefore, just picked out about fifteen acres of woodland and instructed my superintendent to have only the underbrush cut out, and as it is on limestone ledges, I thought I would try it, without hardly any exposure to the sun. I see that you advise people not to sow blue grass in the winter or spring, and if they do the chances are good for failure. Does this refer to North Georgia, or farther South? I am very particular to make no mistake, and I ask these questions because my superintendent has arranged to sow blue grass seed this spring. Is it necessary to fertilize the land? He thinks not, but I am of the opinion that it would be better.

In the September number of the "Southern States," on page 291, you speak of a book on certain grasses called the "Farmers' Book on Grasses." Can a copy of this be had?

I have also read with a good deal of in-



terest your remarks in regard to Bermuda orchard grass and alfalfa. Anything on this subject I would like very much to get.

Pardon my trespassing upon your time with such a lengthy epistle, but I am making all sorts of experiments, and have already sent some Jersey cattle South to see how they would stand the change in climate.

Thanking you in anticipation of a compliance with my request, I remain,

Yours very truly,

C. E. BUEK.

Answering Mr. Buek's questions seriatim, I do not know where Howard's book on grasses can be got. Doubtless it is now very rare.

Dr. D. L. Phares' book is now very scarce, but I think his son—I do not remember his initials—at Madison Station, Madison county, Mississippi, has a few copies. And Col. W. B. Montgomery has (or had a year or so ago) fifty or more copies. His address is Starkville, Miss. No one needs any other book on Southern grasses than that of Doctor Phares. I wish some publisher would strike another edition. Such a book will be of unspeakable advantage, and a great need in the rapidly-developing sentiment in the South in favor of grass and stock-raising. The Northern and Western immigrants will be clamorous for such a book. It can be improved a little, but is the great book for the South.

Professor S. M. Tracey's address on grasses is not in pamphlet form, unless he has so put it since he sent me an analysis or abstract printed in a newspaper. It ought to be accessible. It is particularly forcible with Northern men, as being the testimony of a Northern man; also for the reason that this gentleman takes far higher ground in favor of the South as a great grass country than he did a few years ago. He is at Starkville, Miss., at the A. and M. college of that State.

I think Col. W. B. Montgomery is still in the business of breeding Jerseys. His address is Starkville, Miss.

I have never known Kentucky blue grass killed South by the sun after it had got a good start. That is the great reason for sowing in the fall, so that by the succeeding summer it has got enough growth.

Undoubtedly it will thrive in the shade,

and hardly any shade too dense for it in the South. Nor should I hesitate to sow it there in the spring, as soon as all danger of its being killed by heavy frosts is passed. Only don't let sheep run on it, or any young blue grass. Of course, I assume Mr. Buek's fifteen acres to be a thickly-wooded grove in these suggestions.

There are very few places South where I would advise sowing any grass-seed in "the open" except in the fall, unless, of course, Southern grasses such as Bermuda, Lespedeza, Paspalums, Mexican clover, etc.

I do not think it necessary to fertilize the limestone ledges if they have any soil on them worth while, so far as getting a "catch" of blue grass is concerned. But while blue grass will grow on comparatively poor land, it and any other grass I know of will do better on rich soil.

Dr. Phares' book on Southern grasses is entitled "The Farmers' Book of Grasses." At least, that is my recollection. Anyhow, when I so quote it, I mean Dr. Phares' book.

I would advise Mr. Buek to sow Bermuda grass this spring. I have bought it of late years here. It could not be got a few years ago, and I suppose it is for sale nowhere else than here—New Orleans—in the United States. I bought my seed some years ago of Richard Frotschen, seedsman, New Orleans, La. If this seed be sown, you can have by next fall a fine area on which to sow Kentucky blue grass and white clover—the ideal combination. You might mix some orchard grass, too. It beats blue grass in standing drought and in growing more rapidly. Indeed, unless you are familiar with blue grass, you will be mightily disgusted at its apparent nothingness for a good while, although it grows much more rapidly South than North and West. And be very sure to get thoroughly ripe blue grass-seed, or you will fail. This is one great reason why blue grass is so largely regarded a failure South. It is stripped before ripe, and won't germinate. Buy thoroughly cleaned seed, and sprout before you sow, so as to test the seed. No apology is needed for enquiries. I am only too glad to serve. I wish Mr. Buek may have many imitators. But blue grass is no new thing in North Georgia. I know not how many fine blue-grass pastures I have seen there in visiting the great stock farms



of such men as Messrs. Peters, Wade, Crook and others, where I spent days in visiting their fine herds.

Mr. Buek will probably lose his Jerseys--to the proportion of one-half--he sent from Virginia to Georgia. Some of the best Jerseys in the world are to be found in Georgia already acclimated. Even Jerseys from Nashville to central Mississippi are subject to acclimation fever.

M. B. HILLYARD.

### A Distinguished Journalist.

Among the arrivals at the Hoyt Saturday night was Mr. Wm. H. Edmonds, editor of the "Southern States" magazine, of Baltimore, Md. This gentleman and his brother are publishers of both the "Southern States" and the Manufacturers' Record, which is one of the greatest American industrial journals. These two publications are undoubtedly doing more to promote Southern interests and development of the South than any other agencies. Almost every important evolution in the South may be traced to those journals, or to their publishers individually. The shipment of corn from the South to the sufferers in Nebraska was due to the Edmonds brothers. That in turn brought about the establishment of the great Grand Army colony of 40,000 souls in Georgia. The Edmonds brothers have had a great deal to do with the growth of cotton manufacturing in the South. They have brought the advantages of the South to the favorable notice of Northern manufacturers and capitalists as it could not have been done otherwise. It was they who originated and arranged the excursion of New England cotton manufacturers to the Atlanta Exposition. These are but a few out of hundreds of such good works to be credited to the Edmonds brothers, besides the continuous and powerful influence of their publications.—Aransas Pass (Texas) Herald.

## MISCELLANEOUS.

Mr. Fred. Johannes, of Rich Hill, Missouri, in an advertisement elsewhere in this issue, offers to go South with a colony and start a newspaper, or would lease a paper already established in a Southern City.

Mr. A. Duncan M. Osborne, of Charlotte, N. C., advertises in this issue a 318 acre stock and truck

farm, adjoining the main line of the Southern Railway, fully equipped with all modern dairy and farm appliances, convenient to market. Mr. Osborne states that he has also made arrangement to secure a large tract of land, which is to be plotted off in convenient tracts for selling to a good class of immigrants. The soil of the country about Charlotte is very productive and is well adapted to trucking. Good roads facilitate the work of the farmer, and railroads radiate from Charlotte in all directions.

An attractive pamphlet, entitled "Snap Shots in Southern Missouri," showing the varied scenery of that State and giving valuable information as to its advantages to immigrants, will be mailed to any address upon receipt of four cents for postage, by J. E. Lockwood, Kansas City, Mo.

Messrs. H. Ruge & Sons, Apalachicola, Fla., offer for sale at a low price some very desirable land in Citrus and Hillsborough counties, on the south coast of Florida.

Mr. Irving Page, of Auburndale, Fla., has for sale many thousands of acres of land in Polk county, a noted truck region, where crops may be grown almost the whole year round.

The exceedingly fertile valleys of the mountain section of Virginia produce grass and grain luxuriantly; even in the mountains there is good grazing. Alleghany and Bath counties, in this area, are excellent stock-raising counties, abundantly watered by clear mountain streams. The land along the rivers and creeks is very productive. The climate is healthy. Messrs. Wm. M. and J. T. McAllister, whose address is Warm Springs, Bath county, Va., advertise elsewhere in this issue that they have for sale 10,000 acres of land, some lying near Covington in Alleghany county and some near Hot Springs, Bath county, at prices ranging from \$5 to \$500 per acre. They will be glad to furnish full particulars to inquirers.

Fertile farms of 10 to 12 acres each, partly cleared and partly wooded, about fifteen miles from the city of Charleston, S. C., may be obtained at reasonable prices by applying to S. R. Marshall, 207 Meeting street, Charleston, S. C., whose advertisement appears on another page. The country has convenient transportation facilities.

Mr. Irving Page, of Auburndale, Fla., advertises that he wishes to unite with some one who has capital to aid him in the colonization of 400,000 acres of land in Florida.

There is apparently an attractive opportunity offered to timber dealers in the advertisement of W. A. Wilcox, Darien, Ga., who has for sale 7000 acres of virgin pine forest in McIntosh county, Ga., at \$10 per acre.

The supreme necessity in selecting a locality for an educational institution is that the climate be healthful. There is no difficulty in this regard with reference to the female college at Thomasville, N. C., which is advertised for sale by H. W. Reinhart, Morehead City, N. C.



# THE SOUTHERN STATES.

APRIL, 1896.

## SOME BITS OF EAST TENNESSEE SCENERY.

Along the eastern border of Tennessee, stretching northeast and southwest, lie the Great Smoky mountains, their steep and rugged sides bearing witness to the terrific upheaval which raised them and formed the series of irregular peaks and ridges. Standing on these mountains at almost any point in the State and looking to the northwest, the eye first passes over a broad rolling valley; beyond it broken foothills, and still further on, at the horizon, another range of mountains which, in their blue distance, seem almost like a combination of sky and earth to form a barrier from the world beyond.

This is the Cumberland mountain range, and is the result of one of those strange freaks which nature has played with the earth's surface when contraction took place as the crust cooled. The range varies from five to thirty miles in width, and on both sides the strata has, through a great fault, been forced into an almost vertical position. In the middle it is almost horizontal, and forms tablelands with steep sides and level tops. The remarkable continuity of this range, together with the wealth of coal, timber and iron ores which accompany it throughout its length from Pennsylvania to Alabama, have made it famous in the industries, and the wildness of its heavily wooded slopes and abrupt cliffs have made it as well known among the lovers of the beautiful.

As wild a tangle of woods and rocks as may be found anywhere occurs

along what is known as the "Clear Fork" of the Cumberland river in the "Narrows," near Jellico, Tenn. This branch of the river passes here between Pine mountain, the western edge of the Cumberlands, and the abrupt cliffs of the tablelands. For three miles the stream is buried almost out of sight beneath the high bluffs and overhanging trees, and its bed is a series of cascades and rapids filled with rocks of all sizes and shapes. A climb through here is no small undertaking, as no sign of path or trail can be found. It is a struggle through thickets of laurel and brush, over fallen timber and around boulders from the cliffs above. Often the sides are so precipitous that it is necessary to cling to the underbrush, and woe betide the unfortunate who has hold of a rotten root. The danger brings an additional appreciation of the wild beauty of the place. Below, the stream rushes along its rocky bed singing a fierce song of freedom, and above it tower the grim cliffs, only half hidden by the trees on the steep slope below and the few bushes which, in some mysterious manner, seem to grow out of the rocks themselves.

Near the head of the "Narrows" the surroundings change. The bed of the stream here is nearer the top of the mountain and the water flows along more gently before taking its wild plunge below. The woods are thicker, too, and the thickest of laurel and rhododendron almost impassable. It is not unusual to hear an old gobbler





NEAR THE HEAD OF THE "NARROWS."



calling his charges together here, and maybe the flock will start out of the woods almost in front of the traveller, flying up the creek with a rush of wings that is startling. Deer may be seen sometimes timidly peering up and down the stream before stooping over to drink. The country is so rough that few hunters venture in, and consequently game driven from other parts of the mountains seek shelter here. It is not always the game the hunter goes to search for, either, as both wild-cats and bear may be met, and they are

unusual size, and one cannot help but be thankful that the difficulties in the way of cutting and removing them have kept the lumbering vandals away. Along the sides of the hollows, and in the bottom, where there are stream beds, rushing torrents in the wet season, the laurel grows in an impenetrable thicket. In May, when this and the rhododendrons, which are plentiful, bud and bloom, the scene is indescribably lovely. The beautiful white and pink flowers against the dark green of the laurel leaves and still darker pine,



ACROSS POWELL'S VALLEY FROM CUMBERLAND MOUNTAIN.

usually found in most inauspicious places.

From the "Narrows" over the Cumberland plateau or tableland there is an apology for a road, which passes through hollows and along small ridges. The greater part of the distance is through virgin forest, where magnificent trees, centuries old, cast heavy shadows and even at noonday give a sombre and gloomy depth to the woods. Some of these trees are of

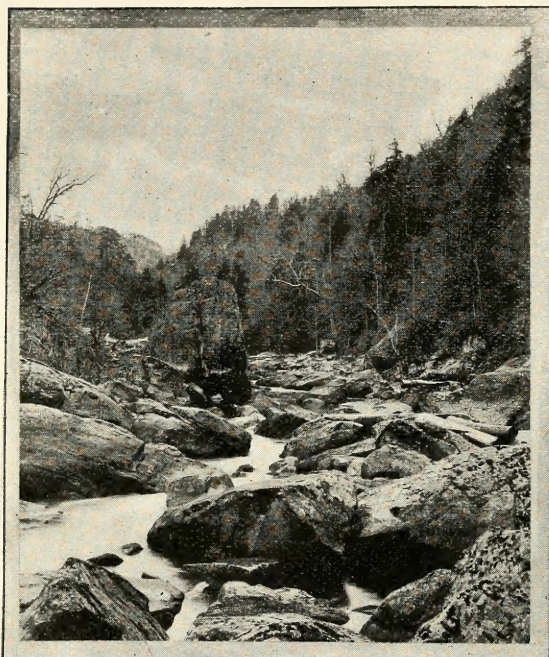
and all other shades of green in the budding trees makes it almost fairy-like. So much so, indeed, that those who see it for the first time instinctively hold their breath lest a change should come.

One of the most beautiful of these places is the approach to Big Creek Gap down the valley from the plateau. Standing in there and looking out toward Powell's valley, the cliffs rise almost perpendicularly on each side

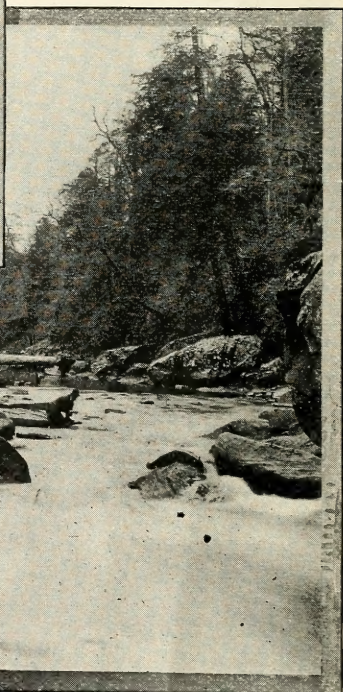


from the creek bed and show only a narrow space through which one sees the valley and hills beyond it. Formerly there was only a rough, narrow country road passing through the Gap, and this was overhung with old forest

ing in the Gap and looking north in the direction of the "Narrows," which are eighteen miles distant, a high cliff rises to the right, while on the left there is a steep slope covered by rocks of all sizes weathered from the bluff above and sparsely grown over with trees. Beyond lie the Cumberland tablelands, high and rugged. Through this Gap there seems to be blowing a constant current of cool air. No matter how hot it may be on the outside, here in the shade it is always cool, and often cold. The creek, which divides into a north and west branch at the upper end of the Gap, is as clear as crystal and usually very cold. After heavy



trees, massive rocks on one side and the creek, almost hidden from view by the laurel, on the other. This place was wonderfully beautiful before the so-called "improvements" began. Now the trees have been cut down, a broad road built on one side, a railroad on the other and a limestone quarry in the middle. Even with these destroyers of beauty it presents a wonderfully fine combination of the massive grandeur of tall, solemn gray rock cliffs with stunted trees growing like bristles on their tops, and the softer beauty of the trees and shrubbery at their sides and on the mountains beyond. Stand-



THROUGH THE "NARROWS."

ing in the Gap and looking north in the direction of the "Narrows," which are eighteen miles distant, a high cliff rises to the right, while on the left there is a steep slope covered by rocks of all sizes weathered from the bluff above and sparsely grown over with trees. Beyond lie the Cumberland tablelands, high and rugged. Through this Gap there seems to be blowing a constant current of cool air. No matter how hot it may be on the outside, here in the shade it is always cool, and often cold. The creek, which divides into a north and west branch at the upper end of the Gap, is as clear as crystal and usually very cold. After heavy



all obstructions and carrying on its then turbid, yellow waters, logs, roots and debris washed out of the woods.

Beyond the Gap lies Powell's valley, a soft and peaceful contrast to the wildness of the mountain and forest so close by. This valley is as widely known by its fertility as are the mountains for their rich mineral wealth. For miles along the sides of the Cumberlandlands there is farm after farm, cultivated by a fairly thrifty class of people

long and high ridge at right angles to the direction of Cumberland mountain. South, across the valley, Big creek can be seen winding its way around the succession of hills and ridges that lie between here and Powell's river, several miles distant.

This Gap was quite famous during the stirring days of 1862-65, and many an adventure took place within sight of it. The region was noted for the number and vindictiveness of the bush-

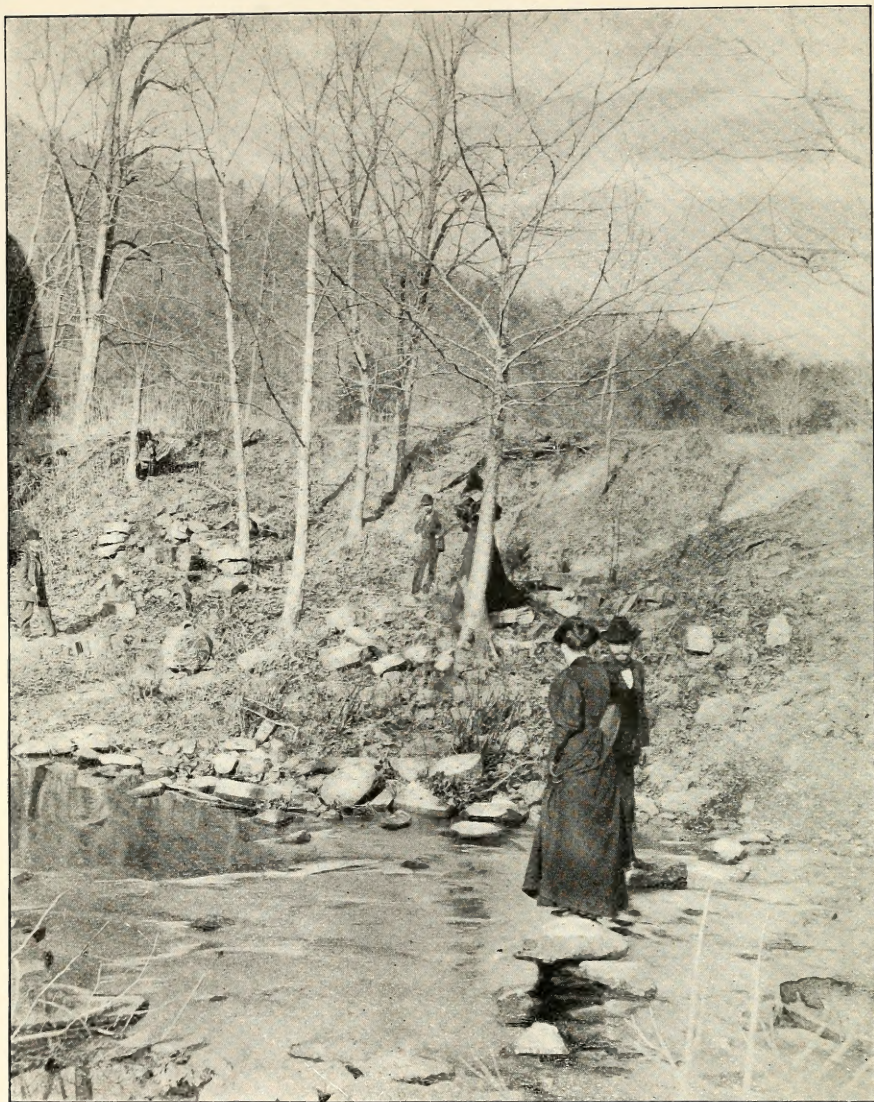


THROUGH BIG CREEK GAP.

who, while probably none have gained great wealth, have at least made a comfortable living and good homes. A fine view of the valley is obtained from the top of the cliffs at the Gap. To the northeast and southwest it stretches out like a great wide trough, rolling gently in small hills and hollows, nearly all under cultivation. To the southwest one can see Cross mountain, a singular geological phenomenon, cutting the valley off and forming a

whackers that infested it, and the Confederate fort, which lies just beneath the cliffs, and is still in a good state of preservation, was anything but a pleasant post to occupy. Sentry duty was looked upon with the same sense of keen enjoyment that one would feel in walking over the barely cooled surface of a bed of lava, expecting at any moment to drop through, for there was no telling when the whirr of a bullet would sound the final roll-call. The pass was





THE RUINS OF AN OLD FORGE, NEAR LA FOLLETTE, TENN.

an important one to hold, since it provided easier access into Kentucky than at any other within many miles.

Lying in the valley just opposite the Gap and stretching across it are the streets and homes of a growing town, an embryo city known as La Follette. It has been eminently well selected as regards beauty of surroundings, for it would be hard to find any place where a more pleasing combination could be found. The ground on which it is lo-

cated is rolling, and at its south side are the hills that form the southeastern edge of the valley. Here almost ideal spots for homes can be had, high above the town and commanding a superb view up and down and of the mountains across the valley.

While the location is all that could be asked as to beautiful surroundings, there is more to be expected of it than this or dependence on agricultural pursuits. Under the Cumberland pla-

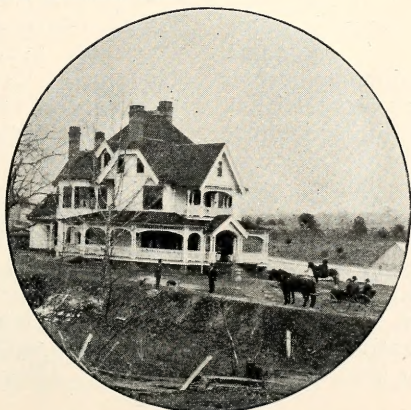


teau lie extensive beds of bituminous coal, and on the top and sides are forests of many varieties of timber. These have been standing for centuries awaiting the wakening touch of industry to put them to the uses for which they were created. Lying here many miles from any rail transportation they have been dormant stores of wealth that will now be opened by a railroad that is being built through them, up Big Creek Gap, across the plateau and down through the "Narrows" on the Kentucky side of the mountains. This will place the town in direct railroad communication with two of the leading trunk lines in the South, the Louisville & Nashville and Southern Railway, and open a market for the product of the mines and mills that may be erected.

Running immediately along the outer edge of the Cumberland mountain on its southeast slope in Powell's valley, there is a vein of iron ore which in past years was smelted in small forges. The remains of many of these can still be seen, one of them just in front of the Gap on Big Creek, and while their operations were not extensive, seldom producing over two or three tons a day at the outside, they must have been operated over a considerable period if one may judge by the size of the openings left where they mined their ore. The nearness of this vein of iron ore to the coal and the close proximity of limestone give within an unusually small radius all the raw materials required in the manufacture of pig iron and should, con-

sequently, prove a satisfactory point for its cheap production. In the ridges south of Powell's valley other varieties of iron ore have been found, and from some places were hauled to the old forges near the mountain.

With these valuable resources near at hand and clays and stones for building and other purposes, as well as an abundance of pure water, the industrial features of the place would seem most encouraging, and it is possible that some day its noisy whistles and the hum of wheels may be heard resounding through the Gap, instead of the whispered song of the trees and stream that now make it so beautiful. In many parts of this most beautiful mountain region where nature now reigns almost supreme, industrial progress will soon open up to the needs of advancing civilization the rich treasures of earth and the smoke of furnaces and factories will to some extent obscure the beauties of nature, but this all means the creation of wealth, the improvement of the agricultural interests, the construction of better roads and the establishment of more schools. The change is not, therefore, to be regretted, but rather to be welcomed, and if the pioneers who are projecting the development of a town at La Follette and the building of industrial enterprises give employment to men where there is none now, they will certainly be entitled to as much praise as he who makes "two blades of grass to grow where only one grew before."



A POWELL'S VALLEY DWELLING.



## THE DAIRY INTERESTS OF THE UNITED STATES AND THEIR RELATION TO THE SOUTH.

*By B. S. Pardee.*

The Dairy Division in the Bureau of Animal Industry of the United States Department of Agriculture began operations July 1, 1895, on an order prescribing that "the object and purpose of this division will be to collect and disseminate information relating to the dairy industry of the United States, in such manner and to such extent as may be deemed most expedient and beneficial." As will be seen, this general order comprised a vast and varied field that furnished almost illimitable subjects of much importance for investigation, and that would afford to a man qualified to direct them ample scope for the employment of all his powers. Fortunately, from among those citizens of the United States who, by study, tastes and practical experience, were fitted for this new position, one was chosen whose name was as well known to the dairymen of the country as it was to the scientists and professors of our colleges and the heads of the various State agricultural experiment stations.

Major Henry E. Alvord, C. E., entered upon his duties with a zeal born of knowledge and years of practical experience, and soon outlined his plans for giving the greatest possible utility to the Dairy Division. These plans, as set forth in the introductory chapter of Bulletin No. 1 of the Dairy Division, which the Department of Agriculture has recently issued, are to collect information bearing upon dairying from all reliable sources available, and to classify and arrange them at the office for future use. It is proposed to prepare publications of three classes: 1. Leaflets upon points in dairy practice, farm dairying, co-operative effort, organization, equipment and manage-

ment of creameries and cheese factories, and facilities for transportation and marketing. 2. Bulletins upon dairy topics somewhat more extended, giving latest information and most approved methods, gathered at home and abroad from expert dairymen, creameries, organizations and the experiment stations and dairy schools; also as to condition, changes and needs of the dairy markets. 3. Reports upon the results of special inquiries and investigations.

Among the subjects which will receive early attention and require considerable time are these: (1) The condition and demands of domestic markets for dairy products; (2) the milk trade—production and service for cities and towns; (3) imitations and substitutes for dairy products, and (4) the number and distribution of pure-bred dairy cattle and of grades, with their effects upon products and markets.

As a basis for intelligent work in the various lines indicated, it became necessary to gather and arrange the general facts as to dairying in statistical form, and the bulletin from which the foregoing is quoted is the result. This bulletin contains most of the statistics which are available relating to the dairy in the United States, and some upon the cattle and products of foreign countries. Some general farm statistics are also added which have a bearing upon the dairy industry or show its position with relation to other branches of agriculture. The bulletin has also extracts from a report by Mr. John Hyde, now of the Department of Agriculture, late expert special agent in charge of agriculture of the eleventh census. These extracts, from the



original manuscript of the statistical analysis, Mr. Hyde prepared for the forthcoming agricultural volume of the census, were made by permission.

Major Alvord does not claim that the census statistics are more than approximately correct, for the enumerators found it impossible to get absolutely correct returns from the wide Western areas of "range country," but as a very insignificant part of these more than 6,000,000 animals, distributed through ten States and territories, could be properly called milch cows or dairy cows, the omission of these range cattle from the general tables has no appreciable effect upon the statistics of the dairy. The cows on farms are not all dairy cattle. A large proportion of those in Texas are beef-breed-

#### THE ENORMOUS VALUE

of the cows, which may properly be regarded as dairy animals, and which at the end of the year 1895 were estimated to number about 17,000,000 and to constitute about one-third of all the neat cattle of the country, is approximately shown by the following estimates. Dividing these 17,000,000 according to their principal products, there are in round numbers 11,000,000 cows that are primarily butter producers, 1,000,000 produce all our cheese, and the milk of 5,000,000 is consumed by the families of their owners, or on the farms where produced, or is sold to be consumed as milk, fresh or condensed. These estimates, with products and values added, may be tabulated as follows:

Cows.	Product.	Rate of Product.	Total product.	Rate of value.	Total value.
<i>Millions.</i>					<i>Dollars.</i>
11	Butter .....	125 pounds .....	1,375,000,000 pounds .....	20 cents .....	275,000,000
1	Cheese .....	280 pounds .....	280,000,000 pounds .....	8 cents .....	22,400,000
5	Milk .....	350 gallons .....	1,750,000,000 gallons .....	9 cents .....	157,500,000

ing animals, and so in a much smaller proportion in several States. For census purposes the farm was fixed at a minimum of three acres, consequently there was no enumeration of domestic animals in cities, towns and villages. Many large milk-producing herds kept in town and city stables would be in this excluded class. There is no basis for any close estimate of the number of these animals or of the quantity and value of their dairy products. But take it all in all, the figures of the census as they are given are the only safe ones to use in any computation.

In a classification of the various annual farm products of this country by values, meats and closely related products stand first in order, the corn crop second, dairy products and the hay crop alternate in the third and fourth places, and wheat occupies the fifth. Hay and corn are so largely tributary to the dairy as raw materials for its support, that it is fair to place dairy products as second only to meat products in the general list.

This gives the grand total value of the dairy products of the country as \$454,900,000. If to this be added the skim milk, buttermilk and whey, at their proper feeding value, and the calves yearly dropped, the annual aggregate value of the products of our dairy cows exceeds \$500,000,000. This is regarded as a conservative estimate, and does not include the manure product, which has a very large but quite uncertain value.

If the value, per head, estimated for cows in this country, viz, \$22 to \$25, is accepted, these animals produce nearly 50 per cent. more than their own value annually. But there is an old farm rule, which has reasonable basis, that a cow is worth whatever she will produce in a year, including her calf. At this rate the average value of the dairy cow in the United States must be about \$30.

The foregoing estimates are based upon an average yield of 350 gallons, or about 3000 pounds of milk, yearly by each cow. This is rather more than shown by the census tables, but those



exclude the large number of town cows, which would materially raise the average milk product. This rate of yield provides for butter and cheese product estimated and for consumption, besides the skim milk and butter-milk residue from the butter cows, about twenty-five and one-half gallons of whole milk per annum per capita of our population. Two hundred and twenty pounds of milk for 365 days (rather more than one-half pint a day) is by no means an excessive allowance, but many people do not, in fact, approach that rate of consumption.

#### THE NEAT CATTLE OF THE UNITED STATES,

according to Mr. Hyde's analysis of the census statistics, constitute a mighty herd. He says:

On June 1, 1890, the 4,564,641 farms in the United States contained 1,117,494 working oxen, 16,511,950 milch cows and 33,734,128 other cattle—a total of 51,363,572.

On June 1, 1880, the 4,008,907 farms contained 993,341 working oxen, 12,443,120 milch cows and 22,488,550 other cattle—a total of 35,925,011.

There is, therefore, an increase of 124,153, or 12.44 per cent., in the number of working oxen; of 4,068,830, or 32.70 per cent., in the number of milch cows, and of 11,245,578, or 50.01 per cent., in the number of other cattle, the increase in the total number of neat cattle on farms being 15,438,561, or 42.97 per cent.

On June 1, 1890, there were also 5,851,640 neat cattle on ranges (not including 433,580 in Indian Territory), of which 1,959,888 were cows and calves. On June 1, 1880, there was an estimated total of 3,750,022 neat cattle on ranges.

There is thus an apparent increase of 2,535,198, or 67.60 per cent., in the total number of neat cattle on ranges, and of 17,973,759, or 45.30 per cent., in the total number of neat cattle in the United States.

THERE IS AN IMMENSE DISPROPORTION in the holdings of neat cattle by the various States and Territories. Iowa has the largest number on its farms to

every square mile of area, her average being 88.25; Illinois comes second, with an average of 54.70; Vermont, Connecticut, New York, Ohio, Indiana and Missouri have between 40 and 50; Massachusetts, Rhode Island, Pennsylvania, Wisconsin, Kansas and Oklahoma, between 30 and 40; New Hampshire, New Jersey, Delaware, Maryland, West Virginia, Nebraska, Kentucky, Tennessee and Texas, between 20 and 30; Maine, the District of Columbia, Virginia, North Carolina, Georgia, Michigan, Minnesota, Alabama, Mississippi, Louisiana and Arkansas, between 10 and 20, and South Carolina, Florida, North Dakota, South Dakota, Montana, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Idaho, Washington, Oregon and California, under 10.

#### IN THE QUALITY OF STOCK

there is a great range from the pure-bred down to the "piney wood critters." Prior to 1890 no statistics of qualities were collected, so that there is no date for comparison between the past and present conditions. In that year, taking the country as a whole, 0.99 per cent. of neat cattle on farms were pure-bred, 16.08 per cent. were grades—one-half blood or higher—and 82.93 per cent. were common or native, including grades less than one-half blood. The statistics of quality by States and Territories show that the District of Columbia has the highest percentage of pure-bred, Iowa and Rhode Island coming next. Connecticut, Rhode Island, Massachusetts and New Jersey have all over 3 per cent. of pure-bred, and, except New Jersey, they have a very high percentage of grades. In the South Atlantic States the percentage of pure-bred ranges from 2.33 in Maryland to 0.45 in Georgia and 0.25 in Florida, while the percentage of grades ranges from 23.58 in the District of Columbia to 3.22 in Georgia and 1.24 in Florida. The last has apparently the smallest number of improved stock in proportion to the number of its neat cattle on farms of any State or Territory in the entire country. The percentage in the



Carolinas and Georgia is also exceedingly low. There is a wide difference between the percentages in the various States composing the South Central Division—Kentucky having 1.52 per cent. of pure-bred and 14.77 per cent. of grades, while Louisiana has only 1.98 per cent. of pure-bred and grades combined, the percentage in Arkansas, Alabama and Mississippi being almost equally low.

#### MILCH COWS ON FARMS.

The increase between 1880 and 1890 of the number of milch cows on farms was the greatest on record. Under normal conditions this increase may be expected to keep pace with the increase of population, as the census figures prove, for out of forty-nine States and Territories, forty-three show an increase and only six a decrease. In the South Atlantic division the largest increase is in Florida, which had 269 cows in 1890 for every 100 she had in 1880. West Virginia, Virginia, Maryland and Delaware also show an increase, while South Carolina and Georgia show a considerable decrease, especially the former State. The decrease in South Carolina and Georgia, and to a less degree in North Carolina, is especially noteworthy, not merely because the decline is considerable, but because these States form the only important exceptions to that increase in the number of milch cows which is reported from almost every part of the country. That this decrease was more or less general is evident from the fact that in Georgia seventy-seven counties show a decrease as compared with sixty showing an increase; in North Carolina fifty-five show a decrease as against forty showing an increase, while in South Carolina twenty-six show a decrease and only six an increase. Taking the South Atlantic division as a whole, there is an increase.

In the South Central division every State shows an increase, the additions since 1880 ranging from 20,645 in Alabama and 20,769 in Louisiana to 397,263 in Texas. In Tennessee, Alabama, Louisiana and Arkansas the in-

crease has failed to keep pace with the growth of population, and that such has not been the case with the division as a whole is due to the very large increase (65.54 per cent.) in Texas. A noteworthy feature of the statistics for this division is the comparative uniformity in the number of milch cows to every 1000 of the population in three of the principal States, Kentucky having 196, Tennessee 195 and Alabama 193 milch cows for every 1000 of their inhabitants. In Texas the average is as high as 449 per thousand, while in Louisiana it is only 149 per thousand.

#### DAIRY PRODUCTS.

The total production of milk on farms in the United States in the year ending December 31, 1889 (not including farms of less than three acres, except where \$500 worth of the produce of the farm had been actually sold during the year), was 5,209,125,567 gallons, equivalent to 315½ gallons for each milch cow reported on June 1, 1890, and to eighty-three gallons per head of population.

The total production of butter on farms (as above defined) in the year ending December 31, 1889, was 1,024,223,468 pounds, as compared with a total of 777,250,287 pounds in 1879, and the total production of cheese 18,726,818 pounds, as compared with a total of 27,272,489 pounds in 1879, an increase of 246,973,181 pounds, or 31.78 per cent., in the production of butter on farms, and a decrease of 8,545,671 pounds, or 3 per cent., in the production of cheese on farms.

The total for States of the South and Central divisions was of milch cows 4,199,123, or about 25 per cent. of all in the country. Of milk produced on farms there was a total of 851,422,340 gallons, or about 16 per cent. of the total product.

Of butter made on farms the total was 213,463,183 pounds, or about 20 per cent. of the whole output.

Of butter made at creameries the total output was 2,254,607 pounds, or about 1¼ per cent. of the country's



product. Of cheese made on farms the total weight was 589,658 pounds, against a national output of nearly 19,000,000 pounds.

Of factory cheese the Southern product was but 175,300 pounds, an infinitesimal fraction of the 238,000,000 pounds made in the United States.

The following statistics from the eleventh census tell their own story by giving the total of cows and dairy products for the entire country, and for the Southern States:

that the total production of butter averaged no less than 19.24 pounds per unit of the population.

These statistics show that while there was a smaller production of farm butter in the States of the North Atlantic group than in 1880, there was an increase in all others, and that the latter was greatest in those States in which there had been the largest expansion of the creamery system. Concentration of production, says Mr. Hyde, has always been a distinguish-

States and Territories.	Milch cows.	Milk all produced on farms.	Butter made on farms.	Butter made at creameries.	Cheese made on farms.	Cheese made at factories
	<i>Number.</i>	<i>Gallons.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
The United States...	16,511,950	5,209,125,567	1,024,223,468	181,284,916	18,726,818	238,035,665
South Atlantic Division.	1,369,466	331,728,677	79,270,911	2,143,928	271,291	144,000
Delaware.....	32,574	10,699,362	2,026,498	466,761	359	.....
Maryland.....	142,198	46,601,218	9,999,602	847,277	9,573	14,000
District of Columbia ..	863	459,978	13,769	.....	.....	.....
Virginia.....	273,634	78,143,459	17,949,966	811,890	109,187	109,000
West Virginia.....	188,492	59,449,066	14,063,627	18,000	74,372	21,000
North Carolina.....	223,416	55,250,665	13,129,374	.....	60,760	.....
South Carolina.....	107,184	23,833,631	5,737,557	.....	2,476	.....
Georgia.....	287,717	52,234,508	14,483,323	.....	12,833	.....
Florida.....	113,388	5,056,790	867,195	.....	1,731	.....
South Central Division.	2,829,657	519,693,663	135,192,272	110,679	318,367	31,300
Kentucky.....	364,516	118,497,289	29,038,406	.....	64,822	.....
Tennessee.....	345,311	107,057,116	28,314,387	65,990	69,919	31,300
Alabama.....	292,088	55,568,687	14,548,435	.....	6,131	.....
Mississippi.....	310,159	50,803,371	12,988,637	.....	4,898	.....
Louisiana.....	167,223	12,881,927	2,089,774	.....	3,939	.....
Texas.....	1,003,439	118,475,320	32,100,560	44,689	145,730	.....
Oklahoma.....	16,756	1,544,280	387,920	.....	1,600	.....
Arkansas.....	330,165	54,325,673	15,724,144	.....	21,328	.....

#### MORE FARM-MADE BUTTER.

The great increase in the number of milch cows during the decade of 1880-1890, already noted, has been more than equalled by the production of farm butter, which, notwithstanding the great extension of the creamery system and the decline in the quantities annually exported, has increased even more rapidly than population. In 1880 the production of farm butter by the whole country averaged 15.50 pounds for each inhabitant, and that of creamery butter 0.58 pound for each inhabitant, the total average being thus 16.08 pounds. At the eleventh census, however, the production of butter on farms alone averaged 16.33 pounds per capita of the population, and such had been the increase in the production of butter in creameries

ing feature of American agriculture, and this is exemplified by the butter industry, for while its production is about as general as its consumption, yet more than one-half of the total production of the United States has to be credited to seven States, and almost one-fourth more to seven others. It is worthy of note that the States of principal production are, with few exceptions, those in which the creamery industry has attained its largest development. Commenting upon this, Mr. Hyde says:

The increase in the production of butter per capita of population is due not alone to the increase in the number of cows, but in no inconsiderable degree to the general stimulus that not only the creamery system, but also the dairy industry, as distinguished



from the creamery, is known to have received during the decade ending with 1890, and the result of which is seen in the fact that, while the average production of butter on farms and in factories at the tenth census was 64.83 pounds for each milch cow, the average production at the eleventh census was 72.98 pounds, an increase of 12.57 per cent. That this is not due directly, if at all, to the extension of the creamery system is shown by the fact that nearly all the States that have witnessed the greatest extension of that system during the decade ending with 1890 show a smaller average production of butter per milch cow than at the tenth census, and that many of the leading Southern States that contain no creameries whatever show a remarkable increase in the average production of butter per milch cow, such increase ranging from 50.36 per cent. in Mississippi and 52.56 per cent. in Arkansas to the increase in Louisiana, where the average production has almost doubled, and in South Carolina and Georgia, where it has more than doubled. In this connection, however, it is important to note that from a considerable number of counties in the South, especially in Georgia, a butter production is reported far in excess of the maximum butter-producing capabilities of the entire milk production of such counties. While this apparent error on the part of enumerators cannot but affect, to a greater or less extent, both the total production, either of milk or of butter and the averages for such counties and even for the States in which they are contained, it is not sufficiently general to alter the fact that there has been an increase in the production of butter on the farms and plantations of the Southern States far out of proportion to the increase in the number of milch cows.

#### THE SOUTH A DAIRY REGION.

In quoting thus extensively from this valuable bulletin, the writer has aimed to spread before the readers of "Southern States" the most noteworthy facts concerning this immense and

ever-increasing department of agricultural industry, both because of its general interest and importance, and also because he hopes thus to call attention to the fact that of the five grand divisions into which the census office, for its convenience, grouped the States and Territories on geographical lines, the two divisions within which are all the Southern States constitute a dairy region equal in every respect to any other in the country, and possessing natural advantages peculiarly its own. In fact, it can be proved to the satisfaction of even the most skeptical minds that the several branches of the dairy industry can be conducted on an immense scale in a large part of the South, under conditions more favorable to uniform success and to greater net profits than can be found in any equal area of the United States. This assertion is made, although the census statistics show that the Southern States are very far behind many of the others in their attention to this exceedingly important farm industry. And yet the very statistics that demonstrate the present inferiority of the dairy industry of the South carry with them, if rightly interpreted, evidences of the immense development that would speedily follow the application of intelligent enterprise to this business. In the comments made by Mr. Hyde upon the remarkable increase in the average production of butter per milch cow in the leading Southern States we have noteworthy evidence of one of the natural advantages the South has for the dairy business.

After stating that this increase ranges from 50.36 per cent. in Mississippi and 52.56 per cent. in Arkansas to nearly 100 per cent. in Louisiana and to more than 100 per cent. in Georgia and South Carolina, he adds that in many counties in the South, especially in Georgia, a butter production is reported far in excess of the maximum butter-producing capabilities of the entire milk production of such counties. This Mr. Hyde regards as "an apparent error on the part of enumerators," although he



says it was not general enough to alter the fact that there has been an increase in the production of butter on the farms and plantations of the Southern States far out of proportion to the increase in the number of milch cows.

These statements of Mr. Hyde were prepared for the census report. Had they been made for the Department of Agriculture and been edited by either Assistant Secretary Dabney or by Major Alvord prior to publication, either of these practical scientists would probably have convinced Mr. Hyde that the enumerators had made no mistake, but that the reported increase which was to him so remarkable as to seem to be an error, was due to the fact that in Mississippi and the other States named the dairy farmers had been taught the value of cottonseed meal and hulls for their cows, both as nourishing food and as milk and cream producers. These did not count among the staples of cattle feed prior to 1880, and it was during the next decade that tests made by practical men in all parts of the Southern States, and by the experts of agricultural experiment stations, furnished the necessary data on which the proportion of this kind of provender to be fed daily to milch cows was given general publicity.

Early in the spring of 1884 the writer was making a tour through the counties of Eastern North Carolina. Near Tarboro he saw a small cottonseed-oil mill and a dairy farm on which were milch cows of various grades and a pure-blood bull. The proprietor of these, a young physician to the manner born, was an educated man of practical mind and much enterprise, who by this combination of farm, pasture fields, herd and oil mill, was conducting quietly a series of experiments that paid him a nice annual profit and were accumulating valuable facts for the general information.

To the work of such public-spirited and practical Southerners as was this Tarboro physician, and to the bulletins sent out by such admirably managed State institutions as the North Carolina experiment station, is largely

due the increase in butter production in many Southern counties that amazed Expert Hyde.

#### THE SOUTH'S DAIRYING ADVANTAGES.

Foremost among the South's superior advantages as a dairy region are the many natural economic conditions. These comprise in part the shortness of the season of inclemency and the cheapness and abundance of materials for barns and sheds; the long grazing season—in some sections continuous through the year; the low prices at which desirably located farm lands can be purchased, and the generally low rates of assessment and taxation in the agricultural districts; the abundance of laborers and the low rate of wages. As for necessary household expenses, the Southern dairy farmer can live with equal comfort at not exceeding one-half of what it costs a New England or Northwestern farmer. This is not guess-work, but the testimony of many who during the past twenty years have migrated from the North to the South and have found the change all that they hoped for, and more, as many have voluntarily stated in communications published in the "Southern States" during the past eighteen months.

Another advantage the South offers to the milk and butter farmer is that in nearly every city, town and village of any size there is a demand much greater than the present supply of these articles, so that the dairy located within short transportation distance of such a place is certain of having paying customers for its entire product. There are many Southern districts in which large tracts of land can be bought at low figures, that would delight those Minnesota dairy farmers, numbering 30,000, who supply milk to its 253 creameries, because of the nutritious natural pasturage, shade, pure water, phenomenally pure air, short winters, summers not over-hot and a soil that will produce everything grown in the temperate zone. If these districts, now sparsely settled, were peopled by families like those



that have made Vermont famous for its flocks of Merinoes, its herds of pure-blood neat cattle and its farm and creamery products of butter and cheese; or like those of Iowa, that "have wrested from New York that primacy of position with respect to the number of milch cows and the total production on farms and in factories which the latter State had so long maintained," they would surpass in all that constitutes the comfort and happiness of rural life any other farming section of the United States.

One inducement to Southern farmers to pay more attention to dairying than they have done in the past, and an aid to Northern farmers who may be homeseeking in the South to decide upon their locations, is that the building of numerous cotton mills and other large manufacturing establishments is every year making thousands of new customers for dairy and truck-farm products, from a class of population that in the past had no money to pay for such things. Every new cotton mill that employs a hundred operatives pays to its wage-earners money that is expended for the maintenance of at least three times that number. Every industrial city and town in the South makes a market for the milk, cream and butter, the eggs and poultry, and like foodstuff produced in its vicinity, and the greater the number of its wage-earners the more extended must be the radius from which such supplies are obtained. It is because these industrial centres increase in number every month, and that the populations of those already established are as a rule growing steadily, that the South offers today any number of good markets to its local dairymen, while at the same time it buys vast quantities of salted butter from the North and Northwest.

#### NEEDED IMPROVEMENT IN DAIRY CATTLE.

In his introduction to the bulletin Major Alvord notes the fact shown by the census, that the different products of the average dairy cow in the United States demonstrate that this average

cow "is far below a standard which is desirable and entirely practicable." The statistics prove that there has been a gradual improvement for several decades in the average cow product, but the progress has been far too slow. He says that a very good annual average yield of milk is 5000 pounds, instead of 3000, and 200 to 225 pounds of butter per cow, instead of 125 pounds. Many herds kept in a plain, practical farm fashion attain still better results. There are manifestly many cows in the country, probably some millions, that do not produce the value of their annual cost, however cheap and wastefully poor their keeping may be. It is apparent that if but two cows were kept, of the suggested standard of production, in place of every three of the existing average quality, the aggregate products of the dairy industry of the country would be increased more than 10 per cent., while the aggregate cost to their owners ought to be less, and probably would be. This being true, Major Alvord makes the practical suggestions that every possible influence should be exerted to induce dairy farmers to weed out their herds and keep fewer cows and better ones. At least the average quality of cows kept for dairy purposes should be brought up to the highest attainable, profitable standard. If the Southern dairy farmers would comply with these suggestions and commence improving their stock, they would very soon discover that they were profiting by the change not only in their greater receipts for their dairy products, but also in the steadily-enhancing value of their neat cattle.

During the past quarter of a century, especially during the last decade, numbers of Southern men have given much attention to the improvement of Southern neat cattle, and have by their examples considerably raised the cattle standard of their localities. The late Col. Richard Peters, of Atlanta, and Major Rufus Tacker, of Raleigh, may be named as representatives of the public-spirited Southern citizens who have spent much money in fur-



nishing these living object-lessons to their people, and it is quite within bounds to say that they and their class have created a demand in the South for pure-blood and high-grade stock, the large effects of which will be seen when the statistics of Southern dairy industries shall be published, soon after the opening of the twentieth century. It will then be evident that many of the best Southern dairy farmers have found that the breeding and sale of high-grade milch cows was a very profitable feature of their industry. Northern stock-breeders will readily understand why this should be, for they do not need to be told that high-grade or pure-blood animals born and reared in the home climate are of much more value to their owners than animals of precisely the same blood or grade would be if brought from where all climatic conditions were quite unlike their new ones. The general statistics of neat cattle on farms, as shown by the aggregates of the five geographical divisions, and by the totals that comprise the entire country, are given in the following table, and enable those interested to see at a glance the relative conditions as to quality or breeding of the neat cattle on the farms of the United States on June 1, 1890:

what extent they differ. And because of the great superiority of the Southern over all other sections of the Union in natural fitness for the dairy industry, it is but reasonable that an honest and entirely unprejudiced examination of all attainable statistics and well authenticated testimonies should lead to the conviction that within a very few years at most the South will be as noted for its dairy products, and for its pure-bred and high-grade cattle, as it is now for its cotton, naval stores and early market garden and orchard products.

Mr. R. A. Pearson, B. S., assistant chief of the Dairy Division, in a chapter on "the cows and cattle of foreign countries," that is published in this bulletin, says:

"Considering the large amounts of our dairy products, the development of our dairy cattle and the intensity of the industry in many sections, the United States is the leading dairy as well as stock-raising country."

Mr. Pearson might have added, "and, considering the natural fitness of the South for this industry, and the great interest its own people and those of other sections are taking in the development of its agriculture on all lines, it is no optimism, but reasonably good judgment, to expect that as the

States and Territories	Neat cattle on farms, June 1, 1890.				Percentage according to quality or breeding.		
	Total oxen, cows, and other cattle	Quality or breeding.			Pure bred.	Grades one-half or over.	Common or native.
		Pure-bred recorded.	Grade one-half blood or higher.	Common native or low-grade.			
The United States. ....	51,363,572	506,060	8,257,989	42,599,523	99	16.08	82 93
North Atlantic Division.	5 461,724	96,661	896,528	4,468,535	1 77	16.41	81 82
South Atlantic Division.	3,890 107	28,293	288 420	3,573,394	73	7.41	91 86
North Central Division.	24,572,400	297,393	5,457,320	18,817,777	1 21	22 21	76 58
South Central Division..	11,724,483	54,260	793,609	10,876,614	46	6.77	92.77
Western Division .....	5 714,858	29,543	822,112	4,863,203	.52	14.39	85 09

By comparing the figures for the South Atlantic and South Central divisions with those of the corresponding Northern divisions it is easy to ascertain in what respects and to

United States is the leading dairy as well as stock-raising country of the world, so the South will be eventually the centre of those great interests."

## SOME OF THE CAUSES WHICH IMPEL IMMIGRATION SOUTHWARD.

*By J. B. Killebrew, A. M., Ph. D.*

Nearly all the movements of population during the present decade have been Southward. The long and severe winters in the North and Northwest, the low prices of grain, the frequent failures of crops caused by droughts and hot winds, the small amount realized on investments in agriculture, all have conspired to produce a feeling of restlessness and dissatisfaction among the farmers of the North greater than has ever been known before.

In the meantime, the advantages of the South have been industriously and intelligently presented to the dissatisfied element through such publications as the "Southern States" magazine and other periodicals and pamphlets, until now the stream of immigration is swelling into an inundation which will overflow the whole South. There is no reason to doubt that by the beginning of the twentieth century the South will be by far the most attractive part of America to the best class of immigrants, and in time it will become the most populous and the most opulent.

There have been many active and powerful causes during the past twelve years, in addition to those already named, to bring about this favorable condition of things, which was long delayed by the erroneous impressions and unreasoning prejudices entertained by the people of the North towards the people of the South, and kept alive by petty politicians, who wished rather to retain possession of the political offices through misrepresentations and abuse than to awaken a lofty patriotism among all the citizens of the country by telling the truth without passion or prejudice. For it

is a fact, fully attested by the history of all nations, that the people of any portion of a country who are kept under suspicion by the government can never become very ardent supporters of that government. Until recently the South has been regarded by the government of the United States as England regards Ireland, as Spain regards Cuba, as Germany regards Alsace-Lorraine. Happily for the country, the election of Cleveland in 1884 showed that patriotism is not sectional, and that no people of the United States are more loyal or more devoted to the best interests of the country than the people of the South.

The main reason why the Northern people nursed their prejudices against the South for so long a period after the war was the lack of correct information. While one may go to fifty cities and towns in the South and buy from a dozen to a thousand daily Northern papers, it is difficult to find Southern papers for sale at any newsstand in the North. The consequence is that the intelligent Southern people are much better informed about the entire country than are the intelligent Northern people. And still further, the intelligent Southern citizen visits the North as often or oftener than he visits points in his own State. He never upon his return feels that he has been in a foreign or in any country, but his own. On the other hand, until recently, and since the distribution of much Southern literature throughout the North, if a man from that section visited the South, and returned home, his neighbors would gather around him as though he had been on a visit to Africa, Kamskatka, Nova Zembla, or to some other bar-



barous region, and ask him all manner of questions, not impertinent, it is true, but displaying a total lack of knowledge concerning the resources, capabilities and aptitudes of the South and the social condition of its people. Not infrequently he was looked upon as a man who had been in a den of lions and escaped with his life. The old soldiers, as a general rule, have always been friendly to the South and its opportunities, because they learned much about them during their campaigns. The prejudices, for the most part, were confined to those who had never seen the Southern country or studied its advantages. There has been in this respect a very rapid change for the better. Good feeling, fairmindedness and an earnest desire to learn the true condition of things now distinguish seven-eighths of the prospectors who come South. For the most part, these prospectors return with nothing but praises on their lips for the courtesies they have received and high commendations of the climatic superiority, varied capabilities and striking advantages of the country.

As this ignorance is dissipated by a more frequent intercourse and by the distribution of literature descriptive of the resources and social conditions of the South, the stream of good immigrants broadens and deepens, and the country is soon destined to receive a greatly increased population and to build up a more durable prosperity.

And there are good reasons why the intelligent and progressive farmers of the North should come South. They can do better on a smaller amount of money invested, and farm work is less exacting. The conditions of life are far more favorable. There is no crop grown North that may not be grown under more favorable circumstances and conditions in the South.

Instituting a comparison between the States of Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North and South Dakota, Nebraska and Kansas, known as the North Central States, on the one hand, and the States of Kentucky, Tennessee, Alabama, Mississippi,

Louisiana, Texas, Oklahoma and Arkansas, known as the South Central States, on the other, some significant facts will appear and some startling conclusions reached. The figures used are from the census of 1890.

The value of land, fences and buildings belonging to the 1,923,822 farms of the North Central States was, in 1890, \$7,069,767,154. The returned value of the farm products for the preceding year in these States was \$1,112,949,820, or 15.7 per cent. of the value of farms and improvements. Now take the South Central States, and we shall find that the value of the land, fences and buildings on the 1,080,772 farms embraced in this group of States during the year 1890 was \$1,440,022,598, while the value of the farm products in 1889 was \$480,337,764, which is 33½ per cent. of the total valuation of the farms and improvements.

The conclusion drawn from these figures is inevitable, viz: That the same amount of capital invested in farms and farm improvements in the South Central States will yield more than twice the per cent. on the investment as it would if invested in the North Central States. Nor is this all. A very large proportion of the crops grown on the farms in the North Central States must be consumed in providing for the exigencies of long winters. Stock must be cared for and fed six months, as against an average of three months in the South Central States.

There is, however, a still more powerful argument in favor of the South Central States. Fuel for winter does not cost half as much, nor are there any blizzards to battle with in winter, or dreadful simoons in summer to destroy the products of farm labor. The enjoyments of life are more than doubled by the amenity of the climate and the fruitfulness of the country in the South Central States. If a comparison be established between the sanitary conditions of Tennessee, Kentucky, Alabama and Georgia, and those of Indiana, Illinois, Kansas and Wisconsin, it will be seen that the



superiority is decidedly in favor of the first group of States, especially when we take into consideration the much larger mortality among the ignorant negroes than among the whites.

It may be that in a comparison of the natural fertility of the soil the North Central States are superior. On the other hand, the regularity and abundance of the rainfalls, and the great variety of the crops and versatility of the soil in the South Central States far outweigh the advantages resulting from the natural fertility of the soil in the Northern group.

Experience the world over has long since demonstrated the fact that fertility of the soil alone never make a prosperous people. And this fact with reference to the North Central States is abundantly shown in the large number of mortgages in operation upon the farms of that region, and the small number comparatively on the farms in the group comprising the South Central States. In 1890 there were 1,376,666 mortgages on the 1,923,822 farms in the North Central States, carrying a mortgage indebtedness of \$1,194,352,052. This shows 70 per cent. of the farms mortgaged.

In the South Central States at the same time there were 207,510 mortgages on the 1,080,772 farms, involving a mortgage indebtedness of \$184,729,981, thus showing only about one-fifth, or 20 per cent., of the farms in the South Central States mortgaged, as against 70 per cent. of the farms in the North Central States.

Time and space will not permit of a further inquiry in this most interesting field, but these facts stand out with prominence, that, though the Southern States are employing only the most ignorant labor, as against the most intelligent in the Northern States, yet the farmers owe less, make a larger return on their investments, and enjoy more of the comforts of life by reason of the happy climate and the wonderful variety of products, and this they do with far less toil than their brethren of the North.

It was a fortunate thing for the Southern people that at the termina-

tion of the civil war they had no credit. Stripped of every species of property except their lands; without money, without stock, and without sympathy, they appeared to be the sport of malignant fate. To all their calamities was added the seeming calamity of the want of credit. But the Pandora box had hope left and faith in the destiny of the land which they loved and in whose defense they had poured out their best blood. They had also brave hearts and willing mind to go forward in the restoration of their lost fortunes. The result is, that though \$5,000,000,000 of property was destroyed by the operations of war, more than this amount has been added since to the wealth of the South, and the people are comparatively free from debt. If this has been done with ignorant labor, what may not be done within the next score of years with intelligent labor and a wise management?

Prejudices which war against the very laws of civilized progress have vanished from among the Southern people, and today they welcome the Northern immigrant with the same heartiness, hospitality and sincerity that they would give to old friends. It is the greatest of folly to tell anything but the truth concerning the South and the Southern people. The good and the bad should be told together, and this is all we ask our visitors from the North to do. No country is perfect in everything, and he who makes such representations writes himself down as an unwise man, and he deserves and should receive no confidence from any one. Writers who exaggerate the advantages of the South are more to be dreaded than that scurrilous class of persons in the North who defame everything South as though it were no part of their own country. This latter class soon receives its merited reward in the contempt of all fair-minded citizens from both sections. The former class of writers engenders suspicion and destroys faith even among ourselves. The South should rise or fall on its own merits. Every sensible South-



ern man recognizes the fact that the South needs many things which it has not yet, but which population will bring. The South needs better schools, better roads, smaller farms, a more careful cultivation of the soil, a better system of fertilization and better markets. A good class of immigrants will remedy all these deficiencies.

Nature has given to this section a happy climate, generous soils, an abundance of timber and water, and rich deposits of various minerals. We have health in the breeze, and beauty in the landscape. Intelligent labor will in time make the South the garden spot of all the land.

In conclusion, I desire to say that the people now coming from the North to Tennessee and Alabama are of the highest character. These newcomers are men of energy, strength of purpose, and of first-rate intelligence. They come to the South to help reconstruct its prosperity and to add to their own fortunes. They generally have means sufficient to secure homes and go into business for themselves. Wherever they have settled they have added to the wealth of the community and to the beauty of the country. Our people are receiving them with the greatest kindness, and treating them with the most marked consideration. They must be made to feel that they are at home, and this is an important duty devolving upon the people of the South. These new citizens must not only be received and treated as countrymen and as fellow-citizens, but they must be accorded all the rights and privileges, be made partakers of all the benefits and advantages that the native-born inhabitants enjoy, and they must be protected by all means against the sharks and confidence men that always march with an equal pace along with a body of homeseekers.

These new citizens must also be permitted to enjoy their own religion and their own politics without let or hindrance. Their rights at the ballot-boxes, and in the sanctuaries of religion must be upheld, shielded, protected, and if need be, defended by the strong arm of the State.

No man who does not exercise his rights as a freeman can make a good citizen or become a true lover of his country. A man is a slave already who has not the courage of his convictions, and a nation composed of such men makes the government of a tyrant possible, and the early destruction of freedom probable. However much we may differ as to the political issues or religious questions, no calamity is so much to be deplored as the servitude to a clique, or party, or church so great and so controlling that freedom of thought is not tolerated and encouraged by the best class of citizens. Repression of thought or of honest convictions checks the growth of society and obstructs every avenue to progress.

Justice and kindness to the newcomers will do more to forward the cause of immigration than millions of dollars expended in any other way. Land should be sold to them at the same prices that our own people would have to pay. No deception should be practiced. Everything possible should be done to make the immigrant satisfied with his new surroundings. To epitomize and appropriate one of Edmund Burke's beautiful similes: One grasshopper sitting upon the fence in the sunshine will make more noise than a hundred bullocks reclining under the shade after grazing upon the rich grasses of the meadow. So one dissatisfied or deceived immigrant will do more injury by his chattering to the cause of immigration than a hundred satisfied ones will do good.

# THE SOUTHERN STATES.

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## THE SOUTHERN STATES.

AN ILLUSTRATED MONTHLY MAGAZINE  
DEVOTED TO THE SOUTH.

Published by the

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WILLIAM H. EDMONDS,  
Editor and Manager.

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BALTIMORE, APRIL, 1896.

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**The SOUTHERN STATES is an exponent of the Immigration and Real Estate Interests and general advancement of the South, and a journal of accurate and comprehensive information about Southern resources and progress.**

**Its purpose is to set forth accurately and conservatively from month to month the reasons why the South is, for the farmer, the settler, the home seeker, the investor, incomparably the most attractive section of this country.**

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### **The Value to the South of Immigration.**

A dispatch from Portland, Ore., states that that city "has raised \$32,000 to promote immigration, and that it has invited the State of Washington to join with Oregon in the work of bringing settlers to the Pacific Northwest instead of each State laboring separately."

The "Southern States" has repeatedly pointed out how remiss the people of the South are in spending money to attract immigration. With the exception of a few railroads, which are doing something in this line, although very few of them are carrying out this work as comprehensively as Western roads do, the South itself is practically doing nothing. Here is one town of moderate population which has raised \$32,000 for immigration work, or

probably more than the whole fourteen Southern States in their official capacity have put up for such a purpose during the last five years. If the South wants to get the people it must use the same means which other sections have found profitable. That population is coming South rapidly is true; but this is being done because of the South's advantages and despite the utter failure of the South to do its part. Did the Western States possess such advantages as the South has, they would double their population in ten years. Every village in the whole country would be flooded with literature, and every man, woman and child would hear of their advantages. Unfortunately, the people of the South have not yet learned the value of advertising, whether that advertising be through newspapers or by other means, nor have they fully appreciated that to get immigration they must exercise broadminded liberality, backed by untiring energy.

The Pacific Coast recognizes the value of immigration. It recognizes that the incoming of new people builds up a country, enhances the value of its property, gives opportunity for the creation of wealth, opportunity for social and industrial advancement, opportunity for the building of churches, the establishment of schools, the improvement of roads and the general advancement of civilization.

The most important question before the South—the one upon which its future more largely depends than anything else—is immigration. The incoming of new people in great numbers will settle all the perplexing problems that have confronted this section. It will sweep away all troublesome questions relating to possible race difficul-



ties; it will open to the rising generation of the South opportunities for advancement scarcely dreamed of now; it will bring about the establishment of more schools, more churches and the building of better roads, thus increasing the facilities of travel, and it will give to this section all of the comforts and conveniences of the most advanced civilization and development possessed by the North, added to and increased in proportion as the natural advantages of the South exceed the natural advantages of the North. In view of these facts, it is well worth while for the South to give its attention to immigration, to spend its money, to give its time and energy in seeking to draw people from other sections into this favored region.

### **The Wines of Medoc.**

A recent issue of Chambers's Journal has the following concerning the Medoc vineyards:

"Only by a journey to the very head of the long promontory between the Atlantic and the Gironde can one form an idea of the prodigious quantity of the Medoc wines. For fifty miles you are never quite out of sight of vineyards. Here and there they absorb the horizon on both sides. They are strikingly different in quality, however, as has been said. A patch of wizened, shriveled plants, with a few leaves and no alluring clusters, may be seen absolutely contiguous to a vineyard full of fine, healthy fruit. It is, of course, an affair of cultivation and soil. Like other things, the Medoc grape responds eagerly to loving care. You may have plants of the first pedigree, and the soil that suits them best, and yet fail to produce a distinguished wine if your cultivators are not of as good quality as your plans. Like hops in England, the vines are most sensitive to human attention.

"One marvels a little at the apparently rude nature of the soil to the vines on which labels with famous names are affixed. But the truth is, the Medoc vine does not want to be excessively pampered. Give it a good, rough, gravelly soil, with a

fair proportion of sand underneath, for superfluous rains to vanish readily into, and it will be as grateful to you as it well knows how to be. A gravelly subsoil yields wine remarkable for delicacy, but if there be a preponderance of stones in the subsoil the wine will be strong rather than delicate, appealing to the brain more than to the palate."

Medoc is that district in the French department of the Gironde that has long been noted for the quantity and excellence of the wines it produces. These include the most famous of Bordeaux wines, such as Chateau-Margaux, Chateau-Lafitte and Chateau-Latour. This district lies on the left bank of the estuary of the Gironde.

There is a suggestion in this statement that some of our Southern friends will find well worthy their attention. In the line of sand-hill country that extends from Cameron, on the Seaboard Air Line in North Carolina, down to the highlands opposite Augusta, Ga., and at various places on the Atlantic Coast Line in North Carolina, much the same conditions exist that Chambers's Journal says produce the choice Medoc vintages. Will it not pay then to experiment with the vines of Medoc and ascertain whether they will flourish as luxuriantly as they do in France, and produce grapes equally suited to the production of these valuable wines?

Possibly someone has already tried this experiment. If so, the "Southern States" would be glad to hear from him of the results he has obtained.

The wines of Medoc are in demand in all civilized countries and command high prices. It is more than probable that they could be reproduced in those parts of the South which have a similar climate and soil. If so, those sections could ultimately command the American market and later compete with the wine-makers of the Gironde in the markets of the world.

While wine-making in this country is yet in its infancy as compared with the great

vintage districts of Europe, still it has become an established and profitable industry in many localities, and the time is coming when pure American wine will be preferred to many of the "doctored" products that are imported and are sold because of their famous names, when they are but base imitations of the genuine products of these foreign vineyards.

### **"Malaqua."**

The Journal of Hygiene says:

"'Malaqua:' this is a newly-coined word of apt significance by Dr. Irvine H. Bachman, Ph. D., in Medical Bulletin (mal, bad; aqua, water). The reason why this scholarly professor prefers this word to malaria commonly used (mal, bad; aria, air) is from data of his experimentation, that 'water is the primary cause of infection, that it acts as the direct carrier of the germ into the system through the intestinal tract.' This deductive conclusion is contrary to the received opinion, that the source of malaria is in the air. He demonstrates, experimentally, that surface water is the nest, so to speak, in which the germs of fevers are incubated; that, as a rule, artesian water, or water from deep wells, contains less or no disease-producing germs; that 'the exclusive use of pure, deep-seated water affords entire immunity against malaria in sections of country where no white man can live using surface water.'"

Dr. Irvine H. Bachman, Ph. D., has stolen the thunder of Mr. James R. Randall, who, for the last ten years, employed that term, used that very word, and, in season and out of season, in public writings and private conversation, maintained and demonstrated this theory. We have reason to know that Dr. Bachman was well acquainted with Mr. Randall's writings on this subject, and that he even communicated with that gentleman for the purpose of possessing his views. At least eight years ago, in the Manufacturers' Record, Mr. Randall developed this theory of "Malaqua," and followed it up by several elaborate contributions in the "Southern States" magazine. Dr. Bachman should at least have given Mr. Randall credit for what he had done as a pioneer and for the inven-

tion of the "newly-coined word," malaqua.—Augusta Chronicle.

Mr. Randall's position on this question, first published in the Manufacturers' Record and afterwards elaborated in the "Southern States" magazine, was for a long time vigorously criticized. The Manufacturers' Record urged upon health authorities the importance of a full investigation, because, if Mr. Randall was correct, no part of the lowlands of the South—not even the swamps of Florida—need suffer from malaria. Ridiculed at first, this theory is now being very generally accepted, and it is now admitted that malaria disappears with the use of pure water.

### **The Tide Towards the South.**

Since the earliest days of the existence of the United States as a nation, and, indeed, if we chose to go back to a more remote period, we might say since the beginning of human life in the valley of the Euphrates, there have been times when a spirit of exodus seized the people and induced them to forsake the conditions with which they were familiar and fly to others that they knew not of. It has been contended that these migrations, especially during the earlier ages of the world, were due entirely to an innate restlessness which possessed the people; that they did not believe, on setting out, that any definite reward would be won at the end of their journey, nor did they, in the majority of instances, have any accurate idea as to their ultimate abiding place. When we consider the rugged and adventurous character of the people of these early times as handed down to us by history it seems very possible that they were actuated in their movements principally by a desire to escape from the monotony of a protracted existence in one spot; and yet even in the remotest periods there has seldom occurred any concerted movement of this character in which the



participants did not wrest in some manner from their newly-discovered territory its natural and artificial wealth.

Gradually the effects obtained by these excursions grew to be the cause of them. Instead of the acquisition of wealth being merely a natural concomitant and outcome of what was originally a restless foray, it grew to be the prime incentive leading to the movement; and so it is with the migratory influx and efflux going on all over the world today, the only difference being that the advantages are derived through the peaceful agency of the plowshare and no longer torn from a butchered people at the point of the sword. The excellent facilities now prevalent for the dissemination of facts relative to all parts of the universe have contributed greatly to successful and profitable immigration. The traveler no longer gropes his way, unconscious whether he will find his haven a vale of plenty or a desert of salt. He is posted through agents—through those who have gone before, and, above all, through the press, as to the exact conditions prevalent in any section; and the more thoroughly the advantages of a locality are exploited the more constant the stream thither of seekers after prosperity or after health. The immigrant of today has too many places to pick from with which he has been made thoroughly familiar to explore an unknown region in the devil-may-care fashion of his ancestors, with their rugged crew.

And now we have reached the keynote of this article, after what has, perhaps, been a tortuous and unprofitable journey. The people are coming South now because they are beginning to find out what's there. They never knew it before. It has taken a long time for the beacon-light kindled by the *Manufacturers' Record* and the *"Southern States,"* the flame of which is now being eagerly fed by hundreds of their tardier brethren, to penetrate the mist of

obscurity and prejudice and ill-will and sectionalism and show to the world that this is a fair land and a goodly one. It has shown that the agricultural and mineral resources of this section are unsurpassed; it has shown that the climate is pregnant with health; it has shown that there is room for all, and it has shown that 10,000 members of the Grand Army of the Republic can pitch their peaceful tents on the soil of Georgia, haunted once by the rattle of musketry and the shriek of shell, and be received with open arms by the people.

The zephyrs of the South are singing a seductive strain and the echo is rolling and booming back and forth from the great sounding-board of the press, until it has swollen into a sonorous cry: "The South! The South!"

#### **Western Farm Journals Advertising the South.**

The *Indiana Farmer*, of Indianapolis, Ind., a leading Western agricultural paper, is establishing a colony of Western farmers in Florida. In a letter to the *"Southern States"* the publishers say:

"Our colonization plans in Florida had their inception in the demands of a large number of our readers in this and other States to form a colony for a warmer climate. We began investigating last fall, and looked for the best locality and lands we could find for the colony, and last month, after a wide personal examination in the South, we selected Florida Western Highlands as the locality.

"The lands lie on the railway running from Pensacola east to the Apalachicola river, about midway between these two points. These lands have a good, dark sandy loam, lying upon a good clay subsoil, which make them very durable and productive. The large body of lands selected were obtained at a price for the colony much lower than the lands were held at in small bodies, and will go to the colonists on very easy terms of payment. We find these lands very productive in all fruits except the citrus family, and they lie too high for the latter. They are equally

valuable in the production of a wide range of other crops."

One of the most striking facts in connection with the movement of population Southward is the attention which nearly all leading Northern and Western farm papers are giving to the South. Like the *Indiana Farmer*, a number of them are establishing colonies in the South. It would be difficult to exaggerate the influence for the good of the South which such work as this by Northern and Western farm papers will accomplish. Many thousands of farmers, who for years have had implicit faith in their favorite farm papers, will see in these journals henceforth a cordial endorsement of the South, and will thus be led to personal investigation. All things seems to be combining in favor of the South.

#### **A Sample of Many Letters.**

Morganton, N. C., March 23, 1896.

*Editor Southern States:*

We enclose check to cover bill for advertising for three months. Our card in your magazine has brought inquiries from Tampa to Toronto and from Portland, Me., to Portland, Ore.

THE MORGANTON LAND &  
IMPROVEMENT CO.,

W. C. Ervin, Sec'y.

[If you want to attract wide attention throughout the North and West, advertise in the "*Southern States*."]

We are in receipt of the March number of the *Southern Travelers' Railway Guide*, published by J. R. Watts, Atlanta, Ga. With this number the Guide begins its eleventh year. It is the neatest, most convenient and correct publication of its kind extant, combining, as it does, the very lat-

est schedules of all the Southern roads, a select directory of the hotels and resorts, together with much valuable information pertaining to railway travel throughout the South. Copy of the Guide will be sent by the publisher on receipt of twenty cents.

#### **Galveston From a Foreign Point of View.**

Mr. S. Eaton, of Dublin, Ireland, in renewing his subscription to the "*Southern States*," calls attention to the progress of Galveston, Texas, and suggests that the public has hardly given sufficient attention to the future of that place. In his letter, Mr. Eaton says:

"I lived in Galveston, Texas, thirty-seven years ago, and would suggest that the late developments there are worthy of more notice than has been given that port. The first item of importance in connection with that port is that it now has twenty-two feet of water on its bar, against sixteen or eighteen feet last year, and as the piers are extended the water gets deeper. Look at its geographical position. No port in the Gulf can exceed it in importance. The railroads cannot much longer make or even keep the rates on 600 miles the same as for 1400 miles. At least I judge the American people will not long stand such an injustice. The development of deep water at Galveston will help to centre at this place the trade of twelve Western States. A study of the map clearly demonstrates the geographical position of that place, and it is quite clear that it will necessarily become the import and export point for these twelve Western States."

This is but an illustration of the wide interest which the development of the South is attracting throughout the world, and of how the "*Southern States*" magazine is being closely read not only in this country, but abroad.



# IMMIGRATION NOTES.

## **The Atmore Colony.**

The Balsmyder-Greene Colony Co. has secured about 75,000 acres of land on the line of the Louisville & Nashville Railroad, part of which is situated near Atmore, Ala., and the residue near Bolling. The territory under their control will, it is thought, soon become a paying agricultural district; the soil is varied and productive, rainfall abundant, making irrigation unnecessary, and the water supply is not only unusually plentiful, but of the best character, being pure freestone, soft, free from organic matter and easily obtainable, either from springs or wells, the latter seldom exceeding thirty feet in depth. There are a great number of mineral springs scattered throughout this region. The climate is healthful, and the temperature, moderated in summer by the condition of the atmosphere and the Gulf breezes, is far more endurable than the dry, hot, parching heat of the North, while in the winter months outdoor work is possible every day in the year. This company has an office in the Inter-Ocean Building, Chicago, and at Atmore, Ala.

Mr. Paul Scherer, immigration agent of the Norfolk & Western Railroad Co., has brought several large parties to Virginia, and the outlook for immigration to that section is said to be very encouraging.

## **Settling in North Carolina.**

Mr. R. O. Preyor, Elizabeth City, N. C., in a letter to the "Southern States," gives the following description of his colony:

"We started on a 1000-acre tract; sold that within a few months, and then kept adding more farms to the original tract. We have quite a number of families here from Dakota, Michigan and Pennsylvania, all well pleased with their new homes, and more are expected to come next fall. These colonists are good, Christian people. It is

a delightful change, after having been awakened on Sunday mornings in the North by the rattling of wagons and street cars, to awake here in this country to the song of the mocking-bird. When people have realized the attractions and advantages of the Southland, they have no desire to return to the North."

## **An Extensive Catholic Colonization Enterprise.**

Colonization work is often undertaken by religious organizations, partly to benefit their people needing new homes and partly as a means of planting outposts from which their own teachings may be more surely advanced. A great deal of the emigration to the West was a result of this kind of work. Seeing the coming power and prosperity of the South, several denominations have lately commenced to plan for colonization work in the South. Recently the Marquette Colonization Co., under Catholic auspices, has been vigorously prosecuting its plans for a large settlement in Mississippi. Rev. Thos. F. Cashman is president, and in reply to a letter to him for information, the company, writing from its office in the Manhattan Building, Chicago, to the "Southern States," said:

"The scope of the work has assumed gigantic proportions. The entire control of the company is in charge of Father Cashman. The question of colonization has been with him a life study, and the fact that the Marquette Colonization Co. has now the commendation and endorsement of Cardinal Gibbons, Archbishop Feehan, Archbishop Ireland, Bishop Gabriels, Bishop Heslin and many other dignitaries of the Catholic Church fully attest his ability and fitness for that responsible position. The Marquette Colonization Co. did not succeed in securing its lands and town site until late last December, and hence the work is just beginning. But the prospects to establish there one of the largest colonies in

the United States are indeed manifest. One thought we want to impress is that the purpose of the Marquette Colonization Co. is not to establish colonies composed exclusively of Catholic people. Good men of every creed are solicited to join, and are joining the colony. After the most careful investigation, the company decided to establish the first colony at Merigold, Miss.

"We believe that the most important obstacles which stand in the way of inducing men from the North and West to settle in the South can be removed by the system of colonization which we have adopted. The reasons for this are manifest. The men who have made farming successful in the West require one condition to be certain, and that is that the land be fertile, and corn be one of the staple products. Generally, such land in the South, because of several existing conditions, can be secured only in large bodies and with a very large negro population."

### To Grow Grapes in Alabama.

In the last issue of the "Southern States" some particulars were given regarding a deal then pending for the purchase of 8500 acres of land near Anniston, Ala., intended for colonization purposes. This trade has since been closed and the organization of the Anniston Homestead and Fruit Growing Association has been completed by the election of the following officers: John H. Noble, Frank Nelson, Jr., W. E. Knox and W. G. Ledbetter, of Anniston; O. F. Sampson and R. L. Spencer, of Fruithurst, Ala., and J. B. Merrill, of Edwardsville, Ala., directors; W. G. Ledbetter, president; John H. Noble, vice-president; J. B. Merrill, secretary; Frank Nelson, Jr., treasurer. The company, which is capitalized at \$150,000, has purchased from the Woodstock Iron Works 8500 acres of lands northwest of and adjoining the city, and will colonize with Swedish, German and Scandinavian grape-growers. Two corps of engineers are at work now surveying and arranging the lands into ten-acre tracts. A force of men has been put to work clearing off the grounds, and this will be followed by others, who will plow and set to grapes two acres of each ten-acre tract, no tract being sold unless it contains at least two acres of growing grapevines.

It is a little late in the season, but by rushing matters it is hoped to be able to get 200 acres, or rather two acres on each one of 100 ten-acre tracts, set out in grapevines before the planting season is over. The association will begin running excursions from the Northern States early next month. The association will conduct a hotel for the exclusive use of prospective colonists.

The Cuban Tobacco Growers' Co., near Fort Meade, Florida, propose to start operations, with about 100 acres, for the cultivation of Cuban tobacco. The president of the company is M. A. Abalo; general manager, Sever Recordo Pilota; vice-president, Captain E. Alonzo Cordry. They have established a colony of about sixty Cubans, and expect to increase the number.

Mr. Carl P. Lindholm, of Bowdle, S. D., formerly in the employ of the Minnesota State Board of Immigration, who, it is said, brought more than 2700 people from Norway and Sweden to Minnesota and the Dakotas, in an interview recently with Col. J. B. Killebrew, of Nashville, Tenn., expressed deep regret that he had not gone to Tennessee ten years ago, taking those people with him. Though they have thriven by patient industry and close economy, he believes they would have done far better in the South.

As the result of an excursion to Williamsburg, Va., of a party of prospectors from the North, the sale of a \$25,000 farm on the York river and a large tract of land near Williamsburg was effected recently.

It is claimed that the Indiana Farmer's Western colonization scheme for West Florida is on a more extensive plan even than the Fitzgerald colony. Large colonies of Western farmers are being settled around Chipley, Orange Hill, De Funiak Springs and other places on the Florida Central & Peninsular Railroad in West Florida.

C. W. Van der Hoogt, the general manager of the Prudential Land Co., of Talbot county, Maryland, in a letter recently to Captain Willard Thomson, general manager of the Baltimore, Chesapeake & At-



lantic Railway Co., stated that an advance guard of Holland emigrants had arrived in New York, their ultimate destination being the Eastern Shore of Maryland. Those who have already arrived will be followed by others to the number of about 300. They will be thrifty, hardworking agriculturists, who will settle on lands acquired and about to be acquired by the Prudential Land Co. in Caroline, Talbot and Dorchester counties. The emigrants will devote their attention mainly to trucking and fruit culture.

Messrs. Howard & Wilson, publishers of the Farm, Field and Fireside, of Chicago, Ill., lately carried a colony excursion of sixty people, representing the most substantial farming element of the Northwest, to Green Cove Springs, Florida. It is thought many of these will become permanent settlers.

The Swiss Pioneer Union, of which John Muehlenbach is central president, recently located in Lewis county, Tennessee, will, it is stated, make stock-raising a specialty. The colony has purchased about 12,000 acres of land in and around Hohenwald. They will have several carloads of blooded horses and cattle shipped from Iowa. Mr. Muehlenbach says there will be, at the lowest estimate, 1000 Swiss settlers in Lewis county within the present year, and that one of the most gratifying things in connection with the colony is that nearly every member has enough to live upon for twelve months.

Mr. Max Baum, No. 301 Unity Building, Chicago, Ill., as the agent of a party of German farmers, has been looking up lands in Alabama.

Mr. G. W. Lott, of Shepherd, Ga., has had several bids by representatives of Northern syndicates for a fine body of 12,000 acres of land fourteen miles east of Douglas.

It is the intention of A. O. and W. W. Russell, of Cincinnati, to eventually colonize a large body of land belonging to them in Brevard county, Florida, with farmers from the West and from Sweden. About

78,000 acres are believed to be fine muck lands, suitable for the growing of sugarcane, pineapples, vegetables, etc. The owners will probably expend about \$300,000 on improvements, such as dykes, a ten-mile railroad to connect with the East Coast Line, sixty-odd miles of canal, etc. These gentlemen are members of the printing company of Russell & Morgan, of Cincinnati.

The representative of a Michigan colony has been looking up lands in Florida, near Yallaha.

A party of Iowa home-seekers have been inspecting lands in the neighborhood of Natchez, Miss., with the intention to purchase.

Capt. J. T. Merry, the energetic agent of the Illinois Central Railroad, stated recently in a public speech at Canton, Miss., that since April one year ago there had been settled in Madison county, Mississippi, seventy-five families from Dakota, Illinois and Iowa, 27,000 acres of land having been sold to them. He said that the tide of emigration had only fairly started.

The Georgia Railroad Land & Colonization Co., Augusta, has completed its organization, with a capital of \$10,000, privilege of increasing to \$500,000. Col. D. B. Dyer is president; Mr. H. H. Stafford, secretary and treasurer. The directors are Messrs. P. B. Tobin, W. T. Davidson, J. P. Verdery, Boykin Wright, Patrick Walsh, D. B. Dyer and T. K. Scott. Mr. J. W. Crow was appointed Northern agent, with headquarters at Chicago. He is said to have experience, business sagacity and wide influence.

Danville, Va., is attracting the attention of a Chicago firm representing Swedish and German emigrants.

J. R. Monroe, of Abbeville, Ga., recently closed a deal for 10,000 acres of land near Abbeville to a Chicago syndicate. The purchasers are beginning to colonize the land. They expect to have several hundred families, principally farmers. The land will be cut up into fifty, 100 and 160-acre tracts.

The Abbeville & Waycross branch of the Georgia & Alabama Railroad, runs centrally through the property, and the Ocmulgee river, at this point, is navigable, it is said, for sea-faring steamers. Springs with mineral properties are to be found. The syndicate is said to be composed of men of large means, who propose to spare no expense necessary to rapid development. A large hotel for tourists has been contracted for by Mrs. J. M. Morris, who has also leased one of the mineral springs. A town will be established as a central trading point.

Parties representing syndicates to locate colonies in the South have been making inquiries regarding Glynn county, Georgia, the land there, it is said, being well adapted to the growth of "Sea Island cotton," the proposed industry of the new colonies.

Colonists around the new town of Thorsby, Chilton county, Alabama, will give special attention to fruit-raising. The Concordia and Improvement Association, of which Mr. K. E. Foegan is vice-president, will, it is claimed, spend \$150,000 in the building of homes and the preparation of lands. Land, which the company owns contiguous to the town, is being divided into ten-acre tracts.

The object of an experimental farm of the North Carolina Horticultural Society, at Southern Pines, N. C., is to determine in a thoroughly scientific way the proportions of the principal fertilizing ingredients necessary for the growth of the principal fruits and vegetables. There are two farms, one for fruits and the other for vegetables. The results of the experiments will be watched with great interest. One great advantage this locality and these experiments have over others is that the soil has never before been cultivated, and consequently it has not been influenced by previous cultivation, crops or applications.

About the middle of March a party of thirteen of the Sunny South colonists, of Chadbourn, N. C., met at Mount Olive a party of excursionists from Chicago, and with them inspected the truck farms at that place and Wilmington. On the return

trip, the party visited the lettuce-beds of Mr. J. F. Garrell, of Wilmington, who has two acres under canvas, prepared at a cost of \$1000. At the date of their visit he claimed to have received \$4000 above expenses. Some of the beds were but partially emptied, others growing the second crop, and still others growing radishes, cauliflower and beets. Mr. Garrell expects to close the season for these beds with from \$6000 to \$8000 clear profit to their credit.

Mr. Robert S. Stewart, of Jasper, Fla., has completed a vineyard of forty acres on his father's plantation, near Jasper, the vines having been procured from the celebrated vineyard of the Tifts, at Tifton, Ga.

The Ryals Orchard Co., six miles from Tifton, on the Georgia, Southern & Florida Railroad, has 200 acres in peaches. Major Ryals recently predicted the biggest peach crop in Georgia in years.

The title to the Niagara Co. property, Orlando, Fla., has been cleared up, and the estate has gone into the hands of a gentleman who is a large vineyardist in New York. He has taken hold, it is said, with a vim, which promises to restore interest in grape-growing in Orange county. The present owner is one of the original Niagara Grape Co. of Western New York, where the Niagara has become famous.

Mr. T. J. Murphey, manager of the Hale (Ga.) Orchard Co., stated recently that the prospects for a good fruit crop were never better. The Central Railroad has surveyors at work surveying a railroad from the Hale (Ga.) Orchard Co.'s place to Fort Valley, so as to be able to handle the crop.

The members of the Haralson County Fruit and Vegetable Growers' Association have organized a co-operative branch, under the title of the "Unfermented Wine & Fruit Co. of Tallapoosa, Ga." for the purpose of shipping and selling the products of their vineyards, saving individual expense and being enabled by thus combining to obtain better prices. A number of grape-growers have already joined the company.



# GENERAL NOTES.

## Benefit of Small Canneries.

The benefit of small canneries is well known, but as yet this industry has made comparatively little progress in the fruit and vegetable-growing districts of the South. The idea prevails that a plant for preserving fruit and vegetables must of necessity be expensive. This is a mistake, however, for apparatus of the most modern design, including everything necessary to preserve the products in excellent condition, can be bought at a price which makes it possible for an outfit to be purchased by individual growers. For instance, a plant for preserving 2000 three-pound cans, or 2750 two-pound cans daily, can be purchased for \$100. This includes process and scalding kettles, fire-pot, crane fixtures, furnace doors and grate bars, capping machines and coppers, tipping coppers, scalding basket; also files, tongs, thermometer, syrup gauge, process and exhaust cages, forging stoke and vise.

Two thousand five hundred bricks would be necessary to set kettles of this machinery, including chimney, or a ten-horse power boiler would furnish steam for these kettles. A ten-horse power boiler, including stack and connections between boiler and kettles, would cost \$160. A building 20 by 30 feet would be suitable, or a smaller building, with shed attached, would answer every purpose.

A plant for canning 3000 three-pound or 4000 two-pound cans daily costs but \$150. This includes process, scalding and exhaust kettles, two fire-pots and a double set of capping machines, coppers and the other apparatus already specified. If steam is used, a twelve-horse power boiler, costing \$190, would be required, and a building only 20 by 40 feet in size.

A canning plant of 5000 two-pound cans daily capacity costs but \$200 in addition to a fifteen-horse power boiler, if steam is used. The latter would cost \$210, making a total of \$410.

An outfit to preserve 13,000 two-pound cans per day will cost \$300; with twenty-five-horse power boiler \$575. This is what is known as the steam kettle outfit, and is also adapted for packing peas, beans, corn, oysters, fish and all other articles which need to be hermetically sealed.

Taking a 5000-can plant, costing a trifle over \$400, an extensive grower could readily preserve a large portion of his crop in case he failed to realize a fair price for his crops, and by thus keeping his goods, he could place them on the market whenever the prices warranted a sale. Anyone of these outfits placed in the neighborhood and owned by several growers, for instance, could be operated at a minimum cost, and in one season might save their owners the entire cost of the apparatus.

The improved methods of can-making have reduced the price of these goods to a very low figure. The same applies to solder, soldering fluid, labels, etc., all of which are much cheaper than a few years ago.

## Encouraging More Crops.

The Florida Central & Peninsular Company is carrying out a broad policy in Florida by assisting farmers along its lines to diversify their crops. It has been encouraging the cultivation of fine grades of tobacco and of Sea Island cotton. Mr. Henry Curtis, of Quincy, Fla., has been appointed by the company to stimulate interest in this direction, and he has met with much encouragement in his work.

As soon as Mr. Curtis's appointment had been made known through the press of the State, he was flooded with letters of inquiry on the subject of tobacco-raising, all of which he answered personally. During the latter part of December he made an extended trip through that part of South Florida that is contiguous to the Florida Central and Peninsular Line. Ocala was his first stopping place. There he held a meet-

ing, under the auspices of the county commissioners of Marion county and the board of trade of Ocala, which was largely attended by the principal planters. They were found to be enthusiastic on the subject of diversified industries, and chiefly the culture of tobacco and Sea Island cotton. Both of these great crops were grown profitably in this county long years ago. With the same general results, Mr. Curtis visited Plant City, Bushnell, Sumterville, Leesburg, Orlando, Waldo, Gainesville and other places.

Much of the soil in the Florida Central & Peninsular Company's territory, with proper cultivation, will produce a variety of tobacco that is much sought after in point of texture, color and flavor. A sample was sent to Mr. Curtis last season from one of the counties named, and after being properly sweated, it was found to have both flavor and color exceedingly desirable. From what he knows of the situation, he expresses the opinion that what was known as the orange belt will raise this year from 1200 to 1500 acres of tobacco, and twice as great an area of Sea Island cotton.

In accordance with his duties as agricultural and immigration agent for the Florida Central & Peninsular Company, Mr. Curtis has issued a series of circulars filled with valuable suggestions for tobacco-growers. When Cuba seed is to be used, he considers it preferable to get the "Vuelta Abajo" variety grown one year in the State, only sowing enough fresh seed from the island to furnish seed plants for the coming year.

The success of this departure by the Florida Central & Peninsular shows what can be done by other companies throughout the South. Cultivation of fruit, vegetables, the raising of live stock and other specialties can be greatly increased by such a method. It means increased traffic and earnings for the railroad, as can be readily seen.

Mr. John O'Neill, of Greenville, S. C., bought in North Carolina in November last twenty-three choice young bullocks, which he recently sold, having fed them on cottonseed meal and hulls—450 pounds of hulls and fifty pounds of meal to the feed. The cost was a little less than \$2 a day for the entire bunch. The cattle gained an average of about 180 pounds for the 100 days,

and sold at a profit over their original cost. The flesh of cattle fattened in this way is said to be particularly tender and choice, and is sought by the best butchers. Mr. O'Neill believes that cottonseed feeding is rather cheaper than ensilage, although he will probably adopt the latter method later on. While his cattle paid him some direct profit, he finds his greatest return in fertilizing material.

### **Southern Farmers Are Better Off.**

Mr. T. B. Brooks, of Bainbridge, Ga., in a letter to the Country Gentleman, gives some interesting facts regarding Southern farmers. He says:

"In contrast to the accounts from Northern farmers of their failure to realize profits or even pay their way, allow me to call your attention to the January number of the 'Southern States,' published in Baltimore, setting forth exactly opposite conditions here in the South.

"This magazine sent the following questions to 530 railroad station agents in the South, and published their replies:

"'1. How does the financial condition of farmers in your vicinity compare with that of former years?'

"'2. Are they raising now more food-stuffs (as in contradistinction from cotton) than formerly?'

"Excepting about forty answers from Florida, which are mostly unfavorable as to the first question, on account of the loss of orange trees last winter, at least 80 per cent. are decidedly favorable and encouraging.

"My observation confirms it; the Southern farmers are now, as a rule, better off than for some years past. It is not altogether easy to explain this to the Northern farmer. In part the small crop (acreage) of cotton has brought good prices and a fair net gain, because only the best land was planted, and therefore not much expended in its cultivation. The 'provision crop' (food for man and beast) has been varied and large and prices correspondingly low.

"But the Southern farmer rarely has had any provisions to sell; he generally buys bacon and breadstuffs from the West, paying with cotton. This year he not only has none to buy, but a little to sell. This may be either home-made cane syrup or sugar,



rice, sweet or Irish potatoes, peanuts, oats, rye, corn, tobacco, cow peas, forage or hog meat. 'Living at home' in the South means raising what you eat, and it is quite common here now to find families who live well, buying only coffee, salt and wheat flour. Corn bread, in several forms, is the chief bread, but wheaten biscuits are common.

"A greater gain, and, indeed, it is in substance an economical revolution, is the new method of conducting business, brought about by the prevailing low price of cotton for many years. Merchants were obliged for their own protection to stop making advances to farmers on the strength of their growing cotton. This forced the choice; he must pay or go without the farmer to pay cash or not buy. He had no goods. He has done neither wholly; he has largely produced the things on his own farm, with his own labor, which he used to buy. He has also economized in ways that his brother in the North cannot and will not follow because of climate and fashion.

"This mild climate and the simple inexpensive dressing and furnishing make the expense of comfortably living greatly less than in the North and West. Here nearly all are poor, and the best people are often the poorest. It is my favorite remark that in our South it is both respectable and not inconvenient to be poor, to a degree found nowhere else in the world. I speak from ten half-years' experience here. The Southern farmer, then, is not getting into debt, because no one will trust him, and he is paying off old debts as he can. He 'lives at home,' and sells enough of such staples, as cotton, tobacco and rice, with some provisions, to give him the \$100 to \$200 cash that the 'one-horse' farmer (he who cultivates about thirty acres) needs to handle in money per year to pay his taxes and buy the little clothing, additional food, etc., he requires.

"The above money income may seem incredibly small to many Northern farmers who call themselves poor; but I know a number of respectable men here who have not touched the larger figure, \$200, in annual money income for years.

"If the farmer owns land enough to enable him to let one or more 'one-horse'

farms to negroes for a bale of cotton, each worth, say, \$30, he may then increase his income. His colored tenants are glad to work for him at fifty cents per day, or \$10 per month, and take their pay wholly or in part in cornmeal, pork and home-made syrup. Such a man would probably have a small bunch of cattle running on the range, and would occasionally sell a grass beef for \$8, or maybe an ox or milch cow at twice that price. Such a farmer, if he ran two horses or mules on his home farm would be satisfied to handle \$1 for each day in the year and would here be considered 'well-to-do.'

"These men will go to the market-town every other Saturday, usually have some business in the court, will go 'possum' hunting, on fish-fries and picnics, and occasionally ride after hounds in a fox or wild-cat chase.

"There is no cost for fuel here; it is only the labor of getting the wood to be burned in open fires. These farmers have, as compared with those of the North, practically no costs for traveling, none for schools or amusements or for social entertainments or churches or charities; the subscription-list rarely goes around, and the cost for books and periodicals is from \$1 to, say, \$5; almost no postage, telegraphing or expressage; no furs or heavy winter clothing or bedding; no expense for stoves, for they never have but one, and often none. There are no carpets, no papers, no paint or varnish; no expensive musical instruments or pictures, and low taxes.

"A double-pen log-house, with stable and meat-house, constituting a 'settlement,' can be built and furnished, including the mule, for \$200. One hundred acres of unimproved land can be bought for \$300, making the one-horse farm, plant and stock complete, cost, say, \$500.

"You do not have this class of farmers at the North, where two horses are needed to plow. Here one will break land, there being no sod, thus enabling men of very moderate means to work their own farms, instead of renting or working by the month, as they would have to do in the North. This is emphatically the poor man's country.

"A natural inference from the above picture is that country life here is dull and



scarcely worth living. This is a mistake; life here is exceedingly simple and free from care and annoyance. We are in close contact with nature; we have plenty of glorious sunshine out of doors and the next best source of light and heat in-doors, the open wood-fire, which is better than furniture, doctors or even certain guests.

"Some idea of the extent and variety of climate and products of our whole country is indicated by the fact that while in one great section the farming industry is seriously depressed, with no immediate prospect of improvement, in another almost equal area the farmers are fairly prosperous and the outlook is promising.

"The fact that Southern farmers are buying less from the West than ever before is one of the minor reasons why prices of farm products are low there. This will probably always be true in the future.

"T. B. BROOKS.

"Decatur County, Ga."

### **American Pineapple Culture in Florida.**

While most of the pineapples sold in the United States have, within recent years, come from Cuba, the cultivation of this fruit in Florida has rapidly increased, and last season 50,000 crates were shipped from sections in that State other than the Keys. The output from the central and northern part of the State this year is estimated at 35,000 crates, while, but for the damage to new plantations by freezing a year ago, a crop amounting to 250,000 crates was counted upon for the next few months.

The Bahamas formerly furnished the main supply, which was carried in small sailing vessels taking four to five days to reach this port, while unfavorable winds made a voyage of twenty days not unusual. Most of the pineapples now coming from Nassau and other ports of this group are consigned to Baltimore, where they are canned. As many as 5,500,000 of these pineapples have reached that city within the past four years, and large quantities are canned on the island. Nearly all the Cuban pineapples come to New York, 200,000 barrels and more constituting the imports for a year. These pineapples are all grown near Havana, and shipments continue throughout the entire year. The season begins, however, in the middle of

March and continues at its height for four months, while the Bahama season is a month later in opening. Some of the choicest pineapples have in recent years come from the Indian River section of Florida, and exceptionally large and high-grade fruit comes from Porto Rico. The comparatively small supplies from Jamaica include some excellent varieties, which are in special demand.

The delay of a day in the transportation of this perishable fruit may mean a heavy loss, and twenty-four hours of warm, damp weather may injure a cargo to the extent of 50 per cent. of its original value. No vessels specially fitted for carrying pineapples are yet in service, and this tender fruit is closely packed in steamers carrying sugar and other heating articles. Quick transportation in steamers equipped with improved ventilation and the best storage facilities, as are already in regular use in the banana trade, would open up new possibilities for this department of the fruit trade. At this time when, besides the shortage caused by the loss in Florida, the trade in Cuba is affected by war, prices have been high. The grade known to wholesale merchants as Havana xx, thirty-five pineapples being required to fill a barrel, now commands \$9 a barrel, and this is also the importers' price to wholesale buyers for barrels holding forty-five and ninety of the fruits.—Garden and Forest.

Mr. Charles Adamson, 119 S. 4th street, Philadelphia, has been appointed industrial and immigration agent for the East & West Railroad Co. The line of this road passes through one of the richest mineral and agricultural sections of the entire South—one having many advantages for almost every line of industry, as well as for diversified agriculture. The country tributary to the road is notably healthy, with an unusually invigorating climate.

### **Hop Growing in the South.**

It is reported that hop-growing is to be greatly increased in North Carolina, owing to the success of the experiments already made. A large area is being planted in hops in Warren county. In Richmond county several farmers are planting hops, and buildings will soon be erected to cure



the hops right in the field where they are grown. In the Southern Pines section the farmers are preparing to go into the industry quite largely. They will not plant this spring, but are preparing for planting next fall. Some of the grape-growers in that region are contemplating going into the business of raising hops.

### To Encourage Agriculture.

The "Southern States" has several times referred to the commendable efforts of the Charleston News and Courier to encourage diversified farming in South Carolina by offering prizes. The following is its list for 1896:

Fifty dollars for the most profitable tobacco crop grown from one acre.

Fifty dollars for the most profitable tobacco crop made by a person who has never raised over 100 pounds before.

Fifty dollars for the hog raised at lowest cost in 300 days after March 1.

Fifty dollars for the best smoke-cured hams made from hogs raised since November 1, 1895.

Fifty dollars for the heaviest ten fleeces from one flock of sheep.

Twenty-five dollars for the ten heaviest sheep in any one flock.

Twenty-five dollars for ten ewes breeding the most profitable number of lambs.

Gold medal for the most valuable acre of hay, and silver medal for the next.

One hundred dollars for the best record of "all-round" farming made with any four crops or live stock.

One hundred dollars to the woman who personally makes the best record in raising dairy or other products.

### South Carolina Tobacco.

The success of tobacco-planters in South Carolina is attracting much attention on account of the profits they are realizing. Mr. C. S. McCullough, near Darlington, S. C., obtained a total yield from nineteen acres of 27,000 pounds, and this entire lot sold ungraded at twelve and one-half cents per pound, making a net sale of \$3375 from the nineteen acres.

Mr. McGill, in the same section, gathered and sold 1486 pounds of tobacco from one acre at twenty cents per pound, making the proceeds \$297.20. The expense of

cultivating and gathering this acre did not cost over \$35.

Mr. W. J. Williams, of Nichols, planted two and three-quarters acres in tobacco last year, and sold his entire crop to Mr. Croxton for \$874.54. This makes a showing of \$318.01 per acre.

Yet tobacco cultivation is in its infancy in South Carolina, and the industry—for it is an industry—might be termed in an experimental state.

Mr. T. W. McIntosh, of Darlington county, S. C., has given to the Charleston News and Courier the results of his experiment in the cultivation of tobacco. He says he planted one acre last year, from which he gathered 1240 pounds of cured tobacco, which cost \$40, and netted him, when sold, \$115.35. This gave him a profit of \$75.35 per acre. Yet it was the first tobacco he has ever raised.

### Railways as Developers.

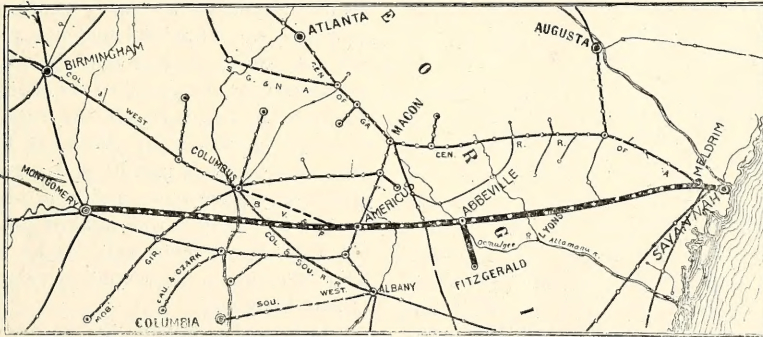
The arrangement of the Georgia & Alabama Railroad Co., by which it extends its train service between Montgomery, Ala., and Savannah, Ga., means much for the development of South Georgia and that section of Alabama traversed by this system. As the map, herewith produced, indicates, it forms the shortest route between two of the most important Southern cities, and gives an outlet to the seaboard for the productive section which depends upon it for transportation facilities. The arrangement was made by leasing a section of the Central Railroad, of Georgia, nearly seventy miles in length; also by a contract securing the right of use of the terminal tracks, depots and steamship wharves of the same company at Savannah. In this way the Georgia & Alabama secures direct connection with the Merchants and Miners' Steamship lines for Baltimore, Norfolk and Portsmouth, Va., and with the Ocean Steamship Co.'s service to New York, Philadelphia and Boston, thus giving manufacturers, farmers and fruit-growers along its route facilities for reaching the great markets of the North by water, or freight can be handled all rail, to the North over the Plant system or Florida Central & Peninsular, with which it connects at Savannah. Its Western terminus, Montgomery, is an important railroad centre on the main line



of the Louisville & Nashville Railway. By intimate traffic relations, the Georgia & Alabama can make freight and passenger rates to any point in the North and West reached by the Louisville & Nashville and its connections. The advantage of this is manifest, and shows what broad opportunities are offered to market products in Chicago, St. Louis or other large cities north of the Ohio river.

The country tributary to the Georgia & Alabama has been attracting much attention from all parts of the United States owing to the remarkably extensive immigration movements to it, as well as the growth of the long-established towns. Along its route are several very prosperous communities, among them Americus, a city of nearly 7000 people, and an important railroad junction; Cordele, at the junction of the Georgia & Alabama and the Georgia

Fitzgerald four weeks ago. At this date we have within the city limits, built and under construction, 840 buildings. These include store houses and residences. We now have under contract eleven first-class brick and stone buildings. The large Colony Hotel will be built by the colony itself, and will cover the space of 170 by 175 feet, three stories high. Mr. P. H. Fitzgerald will begin the erection of a business block, two stories high, with twelve storerooms below, office rooms above. Capt. W. O. Tift will erect a marble-front brick bank building. J. O. Shepherd and Wm. R. Bowen have under contract a business block of brick and stone, containing four storerooms below, with hall above. The G. & A. Railroad is now completing a freight depot, 40 by 200 feet, also a passenger depot. The Tifton & Northeastern Railroad is being extended to the city. We have eleven saw mills, two



GEORGIA & ALABAMA RAILROAD AND CONNECTIONS.

Southern & Florida roads, a thriving place of about 3000 people, and Abbeville, another railroad junction, where the Abbeville & Way Cross division of the road extends to the colony city of Fitzgerald. The latter has become famous by reason of its rapid growth. It was selected as a site by the Old Soldiers' Colony, as it is popularly termed, of which Mr. P. H. Fitzgerald, of Indianapolis, Ind., is at the head. About 120,000 acres of land have been purchased through Hon. W. J. Northen, of Atlanta. In September last the locality contained only a half-dozen small huts. Its condition today is best described by Mr. Fitzgerald in a letter to the *Manufacturers' Record*, in which he says:

"Our colony now numbers over 9000 people. Our first railroad reached the city of

shingle mills and two ice plants under way. The Standard Oil Co. has leased grounds for its building. The Armour Packing Co. is seeking a location. We are putting in twenty-four artesian wells, ranging from 101 to 250 feet deep. Our members are fast settling upon their lands and building homes."

Several other colonies, attracted by the low price of lands along the Georgia & Alabama, the desirable location and other features, are preparing to move to the same section of the South.

The present management of the Georgia & Alabama, which has succeeded in placing the line upon such a substantial basis, is composed as follows: President, John Skelton Williams, Richmond, Va.; vice-president and general manager, Cecil Gabbett,



Americus, Ga.; treasurer, J. Willcox Brown, Baltimore; secretary, W. W. Mackall, Savannah; general freight and passenger agent, A. Pope, Americus.

It is becoming more noticeable every day that the tide of emigration is turning Southward. Frequent excursions for homeseekers at reduced rates induce many hundreds to look thither for their future home, and of all the countries visited in the South, none produce such unqualified satisfaction as that great Yazoo valley in Mississippi. An outlook from the trains passing over the railroads in this country presents such a prospect as meets the eye only elsewhere on the vast prairies of Illinois. Extensive tracts of land have been cleared in the last few years, so that now, almost continuously along the lines of the Yazoo & Mississippi Valley Railroad and its branches, great plantations open up to the view of the prospectors such scenes as appear only on the great prairies of other States.

More than 20,000 acres of these timber lands have been sold by this railroad in the past year, most of the purchasers being from the prairie counties of Illinois, Iowa and Nebraska. Improvements are constantly being made in buildings; the old planters are buying new machinery and adopting advanced methods of cultivating their plantations. Extensive ditching and tile draining, which have produced such profitable results in the Northern States, is being widely advocated, and already there are companies in this business in Illinois who are preparing to move there with machinery for this purpose, and demonstrate to the people that their lands can be tilled at a small cost that will produce such great results as neither they nor any Northern farmers have yet dreamed could be ever accomplished in farming.

There are a number of farmers from Illinois and Iowa who have moved onto the lands they have bought, and are preparing to raise a high grade of cattle, hogs, horses and mules, being convinced, as soon as they saw the lands, that they could raise stock at the least cost and greatest profit in the Yazoo valley. Many other purchasers are engaged in raising potatoes and other vegetables for the early markets.

## CORRESPONDENCE.

### Some Facts About North Alabama.

*Editor Southern States:*

At this period of our history, when the droughts of crop annihilation and the freezing winters of the Northwest, the barrenness of the worn-out farms of New England and the general promise of better conditions somewhere are together forcing the farmers and industrial workers of those sections to pull up the anchors which have for years fastened them down to precincts where unrequited toil has been their portion and to seek another abiding place for themselves and children, no portion of the United States offers more excellent advantages to these forced emigrants than North Alabama.

Now the first thing that a person who is intending to select for himself a new home wishes to know is, "Where can I find a healthy location—a place where all the profits of my labor and business prudence will not find their way into the till of the apothecary or the purse of the physician?" Every man wishes to see the ruddy glow of health mantling the cheeks of his children, and to know that he is living in a region where pure water and lung-invigorating air will place a wall against the prowling bacteria of fever and murky malaria. This question is answered in two words: North Alabama.

Almost every hillside has an eternal reservoir of crystal water, which even in the long, dry spells of summer are the head-springs of a little branch or larger brook to furnish water to the panting kine. It never occurs in the neighborhood history that water has to be hauled for many miles for the stock, or that they, desperate with thirst, have to be driven miles and miles for this essential feature of all animal life. The Almighty irrigates every pasture and barnyard in North Alabama. In this connection, I feel constrained to make mention of the wonderful limestone spring at Huntsville. It comes right out of the solid rock bluff and in a volume that is a marvel to those whose prime conception of a spring is that of a cut-off gum tree stuck into the earth. In former days the stream that owes its birth to this master bubbler was used to barge cotton upon down to the Tennessee river. The water is as clear as



the absence of foreign matter can make it, and is the pride and joy of every household in the city. But I have diverted from my emigrant. He can find his healthy location in almost any county in this section, the doctors being the most unprosperous of our citizens. The next thing he wishes to know are the possibilities that are offered in the new settler-claiming sections for material prosperity, for the investment of his capital, large or small, as the case may be, for the demand for laborers or for the purchase of lands upon which to farm and build up his new home. The Tennessee valley of this State is famed for the extreme fructility of its soil and for the large returns from a small amount of labor expended. Nature was in a lavish mood when she fashioned this part of the geography.

This farm land, that will produce all the fruits, vegetables and cereals, can be bought very cheap. Such land, upon which the same amount of stuff could be raised, in other sections would cost from \$50 to \$100 per acre. It can be bought in North Alabama for from \$6 to \$10, in unlimited quantities, ready for the plow. It is no wonder that a healthy stream of movers has turned from the North and Northwest to this promising region. The advantages of cheap, good land, healthy climate, pure and abundant water supply, mild winters, good society and laws well enforced are not to be treated with indifference by men who live in a section of high-selling land, interminable summer-drought and arctic winters, and who wish to better their conditions.

Lands upon which the most prosperous cattle or sheep-raising could be compassed can be bought almost for a song. Sheep upon these ranges can be raised at a mere nominal expense. The only thing necessary is to turn them upon the range.

At Cullman there is the highest evidence of the adaptability of this region to grape culture and wine production. A small colony of thrifty Germans, under the direction of Mr. Cullman—for whom the town was named—settled there some years ago with a view to raising grapes and making wine. The prospect at first was sterile enough, but by diligence and frugality, coupled with the natural advantages around

them, a great industry has been built up, and thousands have found thrift and happiness pursuing this congenial business.

There are hundreds of places in North Alabama as well suited to grape culture as Cullman, waiting to be possessed and turned into fruitful vineyards.

To those who are looking for a location to engage in fruit-raising, or the nursery business, this portion of Alabama especially commends itself. The Morse nursery, eleven miles out from Huntsville, is the largest in the world. A few years ago the site upon which this magnificent industry now stands was barren old fields that had been deserted, as unfit for cultivation. But a little expeditious and intelligent rehabilitation has brought about the most marvelous transformation. The old clay fields have become garden spots—no longer the browsing place of vagrant cattle, but the home of a great wealth-creating industry.

The canning industry, which has been grievously neglected until within recent times, offers an unsurpassed field for the investment of limited capital. The people of Alabama are beginning to see the folly of sending a thousand miles for their canned stuffs, with the added freight and jobbers' profit, when the same goods can be turned out in their own State. These factories, whether large or small, always pay excellent dividends. I have never heard of one in this section that ceased operations or went into bankruptcy.

While it is true that there are times when the fruit crop is not a success, yet the vegetable crop of beans, tomatoes, onions, okra, etc., and the berry crop can always be depended on to furnish ample material for the plants in off fruit years.

In matters of larger moment, the cotton-mill industry is occupying the most attention of the press and the people. In Huntsville there are three cotton and yarn mills, all running on full time, but still a long way behind with their orders. The Dallas Mills, which is one of the largest in the South, commenced operations in 1892; it has 25,000 spindles and 750 looms, manufacturing fine sheeting, from thirty-six to 108 inches in width. This mill employs about 500 hands. The directors are contemplating making extensive additions to the plant.



The West Huntsville Cotton Mill, in the same city, though not so large as the Dallas, is nevertheless a most prosperous and paying institution. It was erected in the fall of 1892. It has the capacity of 6000 pounds of yarn a day. It also manufactures large quantities of ball twine, about 700 pounds per day, and also knitting yarn for underwear and hosiery. About 150 hands are employed.

I have not been able to obtain the statistics from the other Huntsville mill.

All of the features that I have mentioned as existing in North Alabama, besides many of which I have not mentioned, afford the most excellent prospects for securing to this section at an early date a very large influx of home-seekers. Besides the natural advantages afforded by this section, the cleverness and hospitality of the people should have large consideration by those whose wish it is to establish themselves in a congenial atmosphere.

WILLIAM B. BANKHEAD.

Huntsville, Ala.

### **The South As It Is.**

*Editor Southern States:*

Although the publishing operations of Edward H. Phelps, of Springfield, Mass., the founder of *Farm and Home* and the *New England Homestead*, have been pretty fully described, what Southerners know concerning him has been chiefly derived in the past from his apparent enmity to the South and Southern interests; consequently Mr. Phelps's ideas at present will be regarded with special interest by our Southern readers and those in the North who are giving attention to the history of our industrial development and social changes. Mr. Phelps was a visitor to many of the cities on the line of the Southern Railway recently, and while we but give a bare outline of Mr. Phelps's able and useful discourse on Southern people and Southern institutions, yet it gives an idea of facts as they are and presented by a man who, under any circumstances, could not be imagined to be prejudiced in our favor. Mr. Phelps says:

"Our Southward flight brought up many a memory of the civil war, as the train sped past Alexandria, Fairfax, Manassas, Culpeper and other historic places, so dull

and peaceful, but occupied by the great armies thirty years ago. The recollection of those days is fast fading away. The papers retell the stories of the war, and here and there a fire-eating orator pretends to be as bitter a secessionist as ever; but these inflammatory spouters misrepresent the Southern people. After taking much pains to sample public opinion, I am convinced that the South is today as loyal as the North. The past is dead and buried. The faces of the Southern people are toward the future, and it is a future bright with hope and a career of prosperity such as the South has never known before. There is nowhere a cold shoulder for Northern men, but a hearty welcome for Northern enterprise and capital. The large and steady growth of Norfolk, Atlanta and Charlotte, the three most pushing cities of the South, in the very teeth of the hard times, which have been severely felt through the South, shows what the future will bring forth. Already North Carolina has 175 cotton mills, and there are more to follow. South Carolina, Georgia and Alabama are making powerful strides in the same direction. It is true that the one Massachusetts city of Fall River can tally more spindles than the entire South, and that the growth of cotton-spinning in Massachusetts this year will exceed that of the entire South; but never mind all that—cotton-spinning is still an infant industry in the South, and give it time to grow. Grow it will when the Southern mills pay 15 to 20 per cent. on the Eastern capital put into them, as some of them have done during the past year. This compares very well with the 6 and 7 per cent. paid in Fall River. Why should not these Southern cotton mills make big returns to their stockholders? To begin with, they have a thoroughly modern equipment, with every mechanical facility for doing their work well and cheaply. Thus their power is marvelously cheap. Some of the mills run by water, and some of them by steam made with coal which costs only \$1.25 to \$1.50 delivered at the mill, much less than one-third what coal costs in Massachusetts. Then labor is far cheaper than in the North. The mill hands are girls who never had work before, and are glad to work for the wages offered. They are good girls, too, from religious communities. Any girl who bears a bad



name is promptly discharged, for the mill managers do not want that class of help and the other girls will not work with females of loose character. Another financial advantage is the nearness of these mills to the cotton-fields. Where the farmers can unload their cotton direct from their wagons at the mill, as is done at the new Dwight Mills in Alabama, this saves a fraction of a cent per pound on the cost of the cotton. The selling price of the manufactured product is fixed by the sales in Fall River and Providence, and the Southern millmen are only too glad that such is the case, for that means all the more profit to them, as every line of goods made in the South can be manufactured much cheaper than Fall River can possibly produce it, and a small profit for Fall River means, at the same price, a big profit for Southern mills. Then there is no disposition in any part of the South to hamper manufacturers with employers' liability laws or the like.

"The Southern railroads no longer run the poky, crawling trains of former days," continues Mr. Phelps. "The Southern Railway, at least, has luxurious stateroom cars, and its trains run as fast as the express trains of the North. So far as attention to passengers is concerned, Northern conductors should be sent to school in the South. I noticed on our train a poorly-dressed woman, with a sick child in her arms and some heavy hand-baggage. She was traveling alone. When she reached the little way-station which was her destination, the conductor took up the baby as tenderly as if it had been his own, and the colored porter carried out the woman's baggage. I could not help thinking that anywhere in the North the poor woman would have been left to shift for herself."

FRANK A. HEYWOOD.

Woodbury, N. J.

### **Cattle Breeding in the South.**

New Orleans, La., March 27, 1895.

*Editor Southern States:*

I presume that, to the man of average candor, under ordinary circumstances, all that would be necessary to convince him that a country is a fine stock-raising area would be to convince him that it is a great grass country. And reasoning in this truly logical style, it would be fair to assume, under ordi-

nary circumstances, that very little would need to be said to prove that the South is a most superb stock-raising country, after all I have said about the grasses in your columns during the last year.

But to many of your readers, North and West, "ordinary circumstances" and reasoning by analogy won't answer. All things are to be presumed against the South with such. You must fight at every step for your conquests. Every assertion must be proved. And what a time I have had, for the last quarter of a century, fighting against Southern disparagement! Look at some of them. No white man could stand field-labor South. Sun too hot. The South could not raise her own corn and hogs and make hay. She is doing all three with a vengeance; is absolutely selling corn West; maybe, hay and pork; certainly baling hay and packing pork. The South could never raise fine wool. I think I have settled that, lately, in your columns. The South could never make good cheese and butter. That has been settled nearly ten years ago. The South could not raise fruits and vegetables. Sometimes as high as seventy-five carloads of tomatoes in one day from one station on the Southern branch of the Illinois Central Railroad in Mississippi shall be my answer as to vegetables; and let the Georgia Alberta peach-trains reply as to fruit. The South could never be a great cotton manufacturing country. Too hot. Your operatives would die. You never could send corn out of the Mississippi river; it would heat. New Orleans is now badly distancing New York. You never can raise fine cattle South; they will deteriorate; climate too hot; sun and drought forbid grass raising. This last objection I shall meet in this letter, and although I have treated the subject more or less at various times in the press of the country, I shall treat it now in a way, I hope, to make conclusive.

Before doing so, however, I want to emphasize the weight of misconception and slander under which the South has weltered, as in a very sea of detraction and disparagement, before she got to the shore of the world's enlightenment. I have more than the motive of mere retrospect. Slowly and surely is there building up (what I predicted, after gauging the Western mind on the spot) a campaign of detraction of the



South, in order to countervail the enormous exodus of Western farmers to the South. It is well, therefore, that I should give somewhat of a list of popular fallacies and detractions the South has lived down and delivered herself from in the last quarter of a century. Once there was great plausibility in the reply the Western and Northern farmers made to one's assertions that the South would some day raise her own corn, hay, pork, cattle, and manufacture cotton, make cheese and butter. "If she can, why don't she do it?" How often, years ago, have I encountered this taunt in lecturing West in behalf of immigration! Many who used it were sincere. It seemed the height of absurdity for the South to pay \$1.50 per bushel for corn, \$30 per ton for hay, thirty cents per pound for bacon to the West, if the South could raise these herself. But that argument is now obsolete. The South is now (or nearly) quite self-supporting, and is going to send corn, pork and hay of her own production to Europe and North and West ere long.

And, now to my topic again: I shall not go into a treatment of the theme in any decided attention to the different breeds of cattle that the South can and does produce—thoroughbreds of Holsteins, Polled Angus, Devons, Ayrshires, Herefords, Jerseys, Shorthorns. About ten years ago I made a most laborious and exhaustive research into the subject of raising thoroughbred cattle, in the interest of journalism for one of our New Orleans daily newspapers. The investigation covered the whole South. And the raisers of thoroughbred cattle, of one and another breed, were numbered by thousands, and the cattle were innumerable. And there has been no diminution, of course. And I may say, as to one breed—Jerseys—that there is no place in the world, except, perhaps, the Isle of Jersey, where there are as many thoroughbred Jerseys as in East Mississippi, West Alabama and North Georgia.

But I have selected the Shorthorn for the main topic for this paper for several reasons. It is a breed that is a poor "rustler." It requires higher feed and more attention than any other. If the breed can be successfully raised South, a fortiori, can any other be raised? As a scholar might say, *Ex pede Herculem*. You may decide upon whether you can raise thoroughbred cattle

South, if you can raise Shorthorns. And now I am going to submit a document that, to every candid reader, will be conclusive:

"Greencastle, Ind., Jan. 30, 1877.

"Col. M. B. Hillyard, McComb City, Miss.:

"I have but just received from the secretary of the American Association of Shorthorn Breeders a copy of the resolution adopted at the late meeting held at St. Louis, which I enclose. I should be pleased to send you the remarks made upon its adoption, but they are in the hands of the publishers of the proceedings. \* \* \*

"Yours truly,

"A. C. STEVENSON."

Dr. Stevenson's resolution on cattle-raising in the Southern States:

"Resolved, That the idea, too common, that Shorthorns cannot be bred in our Southern States, is erroneous. But, on the contrary, that the climate, and the grass and grain products, are well adapted to the growth and breeding of improved breeds of cattle, and that their cheap lands and their cleared and uncultivated fields offer a fine and profitable opportunity for breeders of Shorthorn cattle."

At the conclusion—in the hand of the secretary, I presume—is this note: "Offered by Dr. Stevenson at the St. Louis Convention of Breeders of Shorthorns, and unanimously adopted."

Could anything be more conclusive or authoritative than that? Dr. Stevenson subsequently told me that the resolution was seconded by one of the (then) greatest authorities of the day on Shorthorns, whose name I just now forget.

Dr. Stevenson had been my guest the two preceding winters—1875-1876—at McComb City, Miss., and I had busied myself in making trips with him, in securing for him the data on which he based this resolution. In the early part of 1879 he visited me at Mobile, Ala. I was then seeking to develop East Mississippi for the Mobile & Ohio Railroad, in the line of grass-raising and stock-breeding, and wanted his powerful help in that behalf. I have, in my letter on Kentucky blue-grass, shown how hard a time I had to convince him that we could successfully raise that grass. As soon as he was convinced that we could raise that grass—his previous visits had satisfied him as to clover, orchard, red top and other grasses—he went back to his home at



Greencastle, Ind., sent down one of his sons and two of his sons-in-law, with the hope that they would buy land and embark in Shorthorn raising. But a yellow fever scare frightened them home.

Every Shorthorn raiser knows who Dr. Stevenson was: the organizer, I believe, of the American Association of Shorthorn Breeders, and, for a time, its president—I believe its first, and an early importer of that breed of cattle from England, and perhaps the best—certainly among the best—Shorthorn users of that day.

After I had felt thoroughly assured of my ground, I made up my mind to make a strong move in behalf of Shorthorn breeding on the Mobile & Ohio Railroad. So, in 1880, I invited two of the prominent citizens of East Mississippi to be my guests to the blue-grass region of Kentucky, to inspect the situation. We started from Lexington, and drove to the Blue Lick Springs, taking in all the noted stock-raisers. Returning, we visited the Hamiltons—James and William—at Mount Sterling, Kentucky. It so chanced that one of the sons of one of these Hamiltons had married a relative of mine, and this gave me a “touch” with them. At the time of my visit there was a banquet given at Winchester, after the regal fashion of those rich and hospitable people.

“Archie” Hamilton—generally master of ceremonies—had put me forward to reply to one of the toasts—“The Cow.” Fortunately for me, I knew some great things about Shorthorn breeding South. I had had some pretty hot discussions with these Kentucky breeders as to the possibility of raising Shorthorns South; but I had the facts.

“Where,” said I, “did Mr. Hamilton get his ‘Duke of Noxubee?’” The enquirer was nonplussed.

“He got him of Simeon Orr, of Mississippi, and he was named the Duke of Noxubee for the county of that name in that State,” I replied. No need to tell a Shorthorn breeder what the Duke of Noxubee was. “Archie” Hamilton knew well, and many a Shorthorn breeder paid fabulous prices for his “get.”

“Where,” I asked, “were the highest-priced Shorthorns ever sold raised?” No answer.

“By Simeon Orr, of Noxubee county,

Mississippi,” said I. Then there was a hubbub, to be sure. Contradictions came fast. But the veteran, Abe Renwick, a guest of the occasion, the proprietor of the “Red Rose of Sharon” strain, one of the greatest authorities living in his day, said: “Mr. Hillyard is right. The sale was at Millbrook, Duchess county, New York. The cow—I forget her name—brought \$39,000, if my memory be not at fault.”

Now, I do not assert that this cow was born in Noxubee county. I forget. But she was raised there, if not born. Sold by Orr to the gentleman there, and resold by him at the price named. But the point is just as good, as against those who hold that Shorthorns bred or raised South deteriorate.

So triumphant was my work in behalf of raising Shorthorns South that “Archie” Hamilton, the son of the owner of the “Duke of Noxubee,” wrote me that he intended to visit East Mississippi, with the view of raising Shorthorns there; but the failure of his health compelled him to sell his precious herd, and I lost sight of him.

Right near the spot where Simeon Orr raised his celebrated Shorthorns, the breed is still raised. Only a day or two ago I had a letter from a noted breeder there, telling of his choice blue-grass pastures, and how he was renting some of them for grazing. Think of that, ye who say we can’t raise Kentucky blue-grass South!

If I do not mention other States South as raising Shorthorns it is for want of space for my letter. Forty years or more ago magnificent Shorthorns were raised here (Louisiana), and there is no difficulty in any Southern State. I could fill a large letter with references to superb Shorthorns South in ante bellum times from the agricultural reports, from which I have so largely quoted in my articles on sheep-raising.

I have preferred to give what I have written, because it is so authoritative and irresistible.

M. B. HILLYARD.

## MISCELLANEOUS.

Mr. A. D. M. Osborne, of Charlotte, N. C., who had a small advertisement in the “Southern States” for February and March, writes as follows:

“Your magazine is certainly read very closely by the people of the North and East. I do not think I have ever seen such response to a small



advertisement. (My stenographer has 'struck for higher wages.')

It is the mission of Littell's Living Age to select the very best of all the literature published in British magazines and reviews and serve it fresh to its readers every week. This thin, modest, fawn-covered weekly volume of sixty-four pages is, in fact, the largest as well as the richest of American magazines. The March issues gave the usual feast of good things, brought from the fields of history, biography, discovery, travel, romance and poetry. Among the valuable papers which appear in these numbers may be mentioned "John Stuart Blackie," by A. H. Miller; "Our Limited Vision and the New Photography," from the London Lancet; "Reflex Action, Instinct and Reason," by G. Archdall Reid; "A Sister-in-Law of Mary Queen of Scots," from Blackwood; "The Two Dumas," by C. E. Meitkerke; "The Evolution of Editors," by Leslie Stephen, and "Florian," by Augustus Manston. Littell & Co., of Boston, are the publishers.

The Review of Reviews for April contains the most complete account yet published of the Cuban situation, written by Murat Halstead and elaborately illustrated. The Pending Campaigns in Abyssinia and the Soudan are described by the editor in the "Progress of the World" (together with various other foreign and home topics), and illustrated with a map and a large number of portraits and pictures. Other articles in the April number are "English Response to the Appeal for Arbitration;" "Murat Halstead—A Sketch," by Albert Shaw; "An American Heroine in the Heart of Armenia;" "Shall We Have the Poe Cottage?"

The McDowell Fashion Magazine at hand contains many new ideas of great value to both professional and amateur dressmakers.

"La Mode de Paris" and "Paris Album of Fashions" cost \$3.50 per year's subscription, or thirty-five cents a copy. The "French Dressmaker" is \$3 per annum, or thirty cents a copy, and "La Mode" \$1.50 a year, or fifteen cents a copy. If you are unable to procure either of these journals from your newsdealer, do not take any substitute, but apply by mail to Messrs. A. McDowell & Co., 4 West 14th street, New York.

Theatre toilettes, reception gowns, marvelous spring hats, children's frocks and everything bewitching; and appropriate to the season, are shown in illustration and description in the number of Harper's Bazar issued on April 11. A striking and timely paper on "Woman's Student Life at Oxford," by Cynthia Barnard, is a feature of the number.

Harper's Weekly for April 11—an issue of unusual size, comprising forty-eight pages and an illustrated cover—is a "bicycle number," and yet by no means exclusively devoted to the wheel. The following is a partial list of its literary and pictorial features: Double-page drawing by W. T. Smedley, "An Afternoon Spin on

Riverside Drive;" two full-page drawings by A. B. Frost, "A Century Run—On the Home-stretch;" "Tourists;" front-page drawing by A. J. Keller, "The Michaux Club;" "The Story of the Wheel," by A. G. Batchelder (illustrated); "Touring," by James B. Townsend (illustrated); "The Racing Side of Bicycling," by Albert Mott (illustrated); "The Bicycle in the Army," by Major Howard A. Gitting, C. N. G. (illustrated); "The Bicycle's Relation to Good Roads," by Isaac B. Potter; "The Bicycle in Relation to Health," by Henry Smith Williams, M. D.; "The Moderns Awheel," by Harry A. Cushing; "Into the Happy Hunting-Grounds of the Utes," by Hamlin Garland, with full-page illustration by Harry Fenn; "Ancient New York Market Rights," by Julian Ralph, with full-page illustration by Al Hencke; "The Naval War College at Newport," by Lieut. S. A. Stanton, U. S. N., with full-page illustration by W. L. Sonntag; "A Natural Protector," complete story by Thomas Wharton, illustrated by T. de Thulstrup.

The "Southern States" is in receipt of a photograph, showing a number of very attractive views, accompanied by the following letter from Mr. C. Irving Page, Auburndale, Fla.:

"I send you a photograph showing some of our orange groves last month. Such erroneous impressions seem to be general about groves, etc., in this section that I photographed a few trees and also some vegetable fields, thinking this might show our present condition better than many pages of writing. That we were badly hurt by the freeze of 1895 goes without saying, but that we were killed out is a long ways from the truth; some trees, having been well protected by our large, deep lakes, timber, etc., did not lose their leaves. One of our growers here estimates his crop this year at 500 boxes of oranges; another, 100, and most all groves about here show more or less bloom, while here and there we find "a regular flower tree." Our fields of tomatoes, egg plants, squash, etc., have not been hurt at all by cold this season, and many shipments are being made daily."

Mr. Page has an advertisement elsewhere in this number.

Representatives of prospective settlers from the Northwest and other sections will find valuable information in the advertisement of Messrs. Samuel W. Goode & Co., Atlanta, Ga., on another page. The tract of 24,000 acres of Georgia yellow-pine timber would seem to offer an exceptional opportunity at the low price asked for it. Besides this, Messrs. Goode & Co. control farm and orchard lands in all parts of the State of Georgia and in other parts of the South, and also city property.

Persons going to Florida, or thinking of buying land in any part of the South, may find something to their advantage in the advertisement of H. Ruge & Sons, Apalachicola, Fla.

North Carolina is attracting widespread attention on account of its facilities for fruit-growing, truck farming, stock raising, dairy-



# THE SOUTHERN STATES.

MAY, 1896.

## ARBOR DAY.

*By James R. Randall.*

The Department of Agriculture, at Washington, has issued a very interesting pamphlet on Arbor Day from the pen of Mr. N. H. Eggleston. This Bulletin, as it is officially called, demonstrates the intellectual force of the writer and his varied and scholarly attainments. Necessarily, Hon. J. Sterling Morton, Secretary of Agriculture, has a conspicuous place in the picture, but it would be impossible to write on this subject withing giving him special and deserved prominence. Indeed, Mr. Eggleston states that his pen was restrained in this respect rather than stimulated.

We are first informed of the commercial value of trees, and this is done at a glance almost by comparing, statistically, the value of the product of gold and silver mines with the products of our forests. In the one case it is \$70,922,000, and in the second case \$1,058,650,859, or fifteen times that of gold and silver.

"Another comparison is very significant. If we add to the gold and silver products that of all other minerals, including such prominent ones as iron, copper, lead, zinc, coal, lime, natural gas, petroleum, salt, slate, building stones, and the twenty-five or more remaining, which are less important, we shall have for the value of all our mineral products obtained during the year 1894, \$553,352,996, or only about one-half the value of our forest products.

"Again, we may make a comparison

in a different direction and with no less striking results. The statistical report of the Department of Agriculture gives the value of our cereal crops for the year 1894 as follows:

Wheat .....	\$225,902,025
Corn .....	554,719,162
Oats .....	214,816,920
Rye .....	13,395,476
Barley .....	27,134,127
Buckwheat .....	7,040,238

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Total.....\$1,043,007,948

or less by \$15,000,000 than our one forest crop."

The depletion of our timber by various railway, mining and other corporations is shown to be deplorably immense, while the most criminal wastefulness is known to prevail where magnificent forests have been scourged by fire as not only to destroy younger growths of trees, but to turn fertile soils into deserts.

"It is estimated that on the average not more than three-eighths of what we cut in the forests is utilized, five-eighths of the material being wasted. In the great redwood forests of the Pacific Coast such is the wasteful method of operation, it is said, that in procuring a railroad tie worth thirty-five cents, \$1.87 worth of the substance of the tree is wasted. In Europe it is estimated that seven-eighths of the forest material is made use of, and the waste is only one-eighth.

"A conspicuous case of wastefulness



is worth noting in this connection, not only as an instance of wastefulness, but for the great and direct damage resulting from it. To meet the demands of a great mining company on one of the Sierra Nevada ranges, a band of men, numbering thousands in all, were sent with their axes into a forest district in that vicinity. It was an extensive region, and the forest presented a stand of trees not excelled, perhaps, in quality in all the country. Every condition of climate and soil had been favorable for their growth. They stood thick and stalwart.

"As the quickest and easiest way of getting out the largest trees, which were the ones wanted for the miners' use, the forest was cut clean and leveled with the ground. Then, the timber having been removed, the remaining trees, spread over miles and miles of the mountain side, were given to the flames. The fire not only consumed the trees, but burned up the

mighty mass of burning fuel that, in many places, they crumbled to gravel. When the rains came and the snows melted rapidly in springtime—having no sheltering foliage of the trees to protect them from the rays of the sun—the ashes of the burned trees, and what was left of the soil, together with the rocky gravel, were swept down the mountain side with torrent swiftness and force, overflowing the banks of the watercourses, tearing them from their places, and pouring out the debris of disintegrated rock upon the fertile meadows below to the depth of many feet.

"The settlers in the peaceful valleys at the foot of the mountains, to whom the dense forests had sent from their saturated spongy soil and the slowly melting snows under their protecting shade a steady and sufficient supply of water to enable them to prosecute their farming operations in that arid region with an assurance of success



LIVE OAK TREE, AUDUBON PARK, NEW ORLEANS, ANTEDATING  
THE SETTLEMENT OF THAT COUNTRY.

soil beneath them—the rich leaf mold, which was the accumulation of centuries of tree growth. The very rocks beneath it were so heated by the

nowhere surpassed, now found themselves at the mercy of torrents in the spring season and droughts in the summer time, and were forced to aban-



don their no longer productive farms. Those green mountain slopes which it had taken centuries of growth to prepare as the guarantee of fertility

cation in a large degree. Millions of trees are in this way planted every year, and the work of reparation goes grandly on along with intellectual im-



LANE AT DARLINGTON, MD.

to the fields below are gone. Naked rocks only are now to be seen in their place. It will take centuries to clothe them again with trees, and meanwhile the valleys and plains below will remain the desert which the greed and recklessness of man have created there."

Under such circumstances, Arbor Day became a national necessity, as well as a national holiday.

Mr. George P. Marsh, the eminent diplomatist and representative of the United States at foreign courts, chiefly in Italy and Turkey, was the first to call attention to this subject, but practical application in the United States was inaugurated by Secretary Morton. To him, Arbor Day honoredly and worthily belongs in a suggestive and actual sense. It is not only a day devoted to tree planting by public schools and communities all over the country, but it is a seminary for edu-

provement and what is felicitously called "tree sentiment." Testimonials of the benefit of this holiday are from the highest sources and almost of overwhelming magnitude.

Mr. Eggleston says:

"It is not a matter for wonder, therefore, that an institution with such a spirit and such possibilities, with so much to commend it to the attention of persons of intelligence and generous feeling, and especially to the ardent natures of the young, should have a speedy and wide acceptance. And so, by its own manifest merit and without any propagandism on its behalf, it has been adopted by nearly every State and Territory of the Union; and limited by no national boundaries, it has even crossed the Atlantic on the one hand, and become established in Great Britain, France, and Northern and Southern Africa; and on the other, within the present year, has crossed



the Pacific and been welcomed in the Hawaiian Islands and in Japan.

"The beneficent results of an institution of this character, and already almost worldwide in its reach, no one can measure. Year by year it will bring millions of people, young and old, into a closer and more intimate contact with nature, unveiling to them its precious secrets, opening to them stores of valuable knowledge, and cultivating in them the best feelings. In our own country it promises to do more than anything else to convert us from a nation of wanton destroyers of our unparalleled heritage of trees to one of tree-planters and protectors. Instead of looking upon the trees with indifference, or even with a hostile feeling, as to a great extent we have done, or regarding them chiefly as material for use in the constructive arts, or to be consumed as fuel, we shall become tree-lovers. A tree sentiment will be created and established which will lead us to recognize and cherish the trees as friends, and while we shall freely make use of them in the various arts and industries of life, we shall be mindful of their value in other respects

and find constant delight in their companionship."

Very interesting accounts are given of the legislation on this subject and how Arbor Day should be observed for a common good. Specimens of addresses made on such occasions are furnished. The work of schools, in a technical sense, is outlined, with excellent illustrations. Trees are considered in their relations as living things, in masses, in forests, in their florescence and their leafless state, the value and beauty of leaves, methods of planting, in streets, grounds, lawns and parks. We are told how these plantings should be successfully done. Then the trees are considered in their ethical attitude, as masterpieces of God, as inspirers of poetry and incentives to reverence and art.

The South should emulate and even surpass the Eastern, Middle and Western States in practical observance of Arbor Day. Texas has done nobly, and her example should be followed everywhere South of the Potomac.

Hon. J. M. Carlisle, superintendent of public instruction in Texas, says:

"Washington's birthday, February



STREET TREE PLANTING.





AN OLD MAINE HOMESTEAD.

22, is observed in this State as Arbor Day. It is observed as a holiday, and is devoted to the planting of trees, shrubs, flowers and the general ornamentation of public buildings and grounds. The patriotic exercises appropriate to Washington's birthday blend beautifully with the observance of Arbor Day.

"The effect of the observance of the day is wholesome. Interest in the study of trees, shrubs and flowers is stimulated, appreciation of the wonders and beauties of nature is heightened, and the sentiment in favor of both physical and moral cleanliness is greatly strengthened, while patriotic feelings are aroused and the people are drawn together by the contemplation of so many great themes in which all have a common interest."

The Commissioner of Agriculture in Pennsylvania, reciting the immense benefits of Arbor Day in his commonwealth, in a most valuable address, says:

"Suppose each child in the State of Pennsylvania between the ages of five

and seventeen years plants a tree which grows to a mature size. Put these all together at fifteen feet apart, and you will have a forest of eleven and one-half square miles. That means 7360 acres of forest—good, productive forest. Each acre of such forest can, in the growing season, give back to the air about 14,500 tons of water by evaporation or transpiration. In other words, as the result of planting one tree for each school-child of today there might be distilled back into our air, from this eleven and more square miles of forest area each growing season, 106,720,000 tons of water.

"Now, I want to ask you if you know what that water does up in the sky. It destroys the frost which kills your crops. That is, each one of you here who plants a long-lived tree of a kind that may grow to large proportions, will, when it has grown to middle size, be placing away up there in the sky over seventy tons of water each year, which is to help protect and produce the grain on which your grandchildren will live. Indeed, it



may be, you will find when you are done with earth that you have placed something in the sky of more importance still. You know that to 'love your neighbor' is half of the divine command. Will you plant a tree somewhere this year?"

Certainly, such blessings, so easily procured, should be availed of enthusiastically by the people of the South.

The South, in such cities as New Orleans, Savannah, Augusta, Charleston and Mobile, for example, has understood the noble art of embellishment by trees along the streets or in the suburbs. This art should be cultivated more and more, until there is, as it were, nothing left short of what we call perfection.

Magnificently endowed with forests as the South is, over one-half of all the

standing timber in the United States being south of Mason and Dixon's line, it behooves this section to appreciate its goodly heritage. Forestry should be made a study throughout this section. Arbor Day celebration ought to be observed in every school in the South, accompanied by some instruction as to the relation of forests to climate and rainfall. Every village and town in the South should encourage the planting of shade trees, emulating in that respect the example of the national government, which has made Washington, because of its shade trees, one of the most beautiful cities in the world. The attractiveness of a home or of a village well shaded, as compared with the barrenness of one without trees, is strikingly illustrated by the accompanying cuts.

## A SUMMER DAY IN DIXIE.

*By Edward Warwick.*

The summers are delightful in the Southern States. Let me describe a summer day in Dixie: There is nothing in nature more nearly approaching the ideal than a summer day. In most climes a summer day is an ethereal revelation, a beautiful jewel plucked from the crown of time, a sparkling laugh from the newborn present, that ripples in successive smiles over the face of all living and growing things. But the summer day in Dixie—ah! here is something without a peer. In the great patchwork of days spread out over the face of the earth the most beautiful blocks fall upon the Southland—a spell of enchantment, a gem from Elysia, a gleam from time's brightest aurora, a ray of eternal hope.

On the mountain tops, where the earth holds up its face, as it were, imploring heaven's benediction, the nymphic zephyrs brew the air for this perfect day. Pure as ethereal dews, it comes from the fountain, gathering the

choicest perfumes from the wild flowers that deck the sun-kissed mountain sides—on it goes through all the Southland, weaving its way through the rays of sunshine into one silken web of jocund day. Like youth, it comes coy-like, but soon bubbles over with rolic and laugh. Like a divine blessing, it is a balm to the wounded heart, a surcease of sorrow. It decks every living soul with garlands of joy and gladness.

Such a compound of the perfect day can only come from the laboratory of the God of nature. All of its component parts are minutely apportioned, the temperature perfect, the moisture exact, the atmospheric motion just sufficient to gently fan the cheek—diffused with the rare golden sunshine of this clime, makes a day pure as the dews of heaven and sweet as the breath of babes. Such is the summer day in Dixie!

## COW PEAS: THEIR ORIGIN AND COMPOSITION, AND THEIR FEEDING AND FERTILIZING VALUE.\*

### ORIGIN.

The exact origin of this leguminous plant is unknown. It is said to be indigenous in India and China, though many unsuccessful attempts have been made by Southern agriculturalists to obtain specimens from these countries for the purpose of identifying botanically, the varieties grown in the United States.

When it was introduced into this country is also undecided. Prof. Brewer gives it as his suspicion that it was about the middle of the last century by the London "Society for the Promotion of Arts and Commerce."

It is known that under the auspices of this society many of our valuable sub-tropical plants (notably cotton) were introduced, and it is highly probable that the cow pea came in at this time and in this way.

This, however, is a mere conjecture, but we do know that the plant was here early in the present century, and was then, as now, called "cow pea."

Why it was ever called "cow pea" is also left to conjecture. One of its Hindoo or East Indian names is "cow lee" and Prof. Brewer thinks that enthusiastic philologists might suppose our name a corruption of that, but he adds there is no evidence other than sound, of the connection of the two names.

Prof. W. R. Dodson, botanist of the State Experiment Station, Baton Rouge, La., experimented last year with sixty-three so-called varieties of cow peas, with the special object of studying them from a botanical standpoint, to see first whether they were included under more than one species, and secondly whether they could not all be classified under a

very few varieties. In his report he concludes from very close study and comparison of the growing varieties that there is but one species of all of the varieties of the true "cow peas" and that the number of varieties can be greatly reduced, probably to five, possibly to three. He regards the solid colors, black, white and red as pure varieties and the others as fluctuating hybrids of these three. The clay is possibly a degenerate red, but its constancy seems to be a character that would almost warrant a distinct variety. So too with those kinds like the granite, which shows little or no variations in the markings of color being small black spots on a dull brown background, possibly in the past a hybrid between a clay and a black.

### VARIETIES.

The so-called varieties of cow peas are very numerous. No systematic method of collecting and classifying them has ever been adopted. Nearly every community has a pea with special characteristics, bearing the name of some prominent farmer whose enterprise led him to import it, or to originate it by selection from some sport found in his or his neighbor's field. In this State we have the "King" pea, the "Colvin" pea and others known only locally, as the result of patient care and intelligence on the part of the originators. Could a careful collection of all of the varieties thus distributed throughout the Southern States be made, their number would largely exceed one hundred.

It is further believed that soil and climate and method of cultivation are factors in the modification of characteristics, which, if repeated, will produce a differential sufficient to constitute a new variety. Experiments have shown that the clay pea, usually a heavy runner,

\*Condensed from Bulletin No. 40 of the Louisiana Agricultural Experiment Station, Wm. C. Stubbs, Ph. D., Director, Baton Rouge, La.



may by continued cultivation on a sandy soil in higher latitudes become a bunch pea. The writer has grown two varieties of clay peas whose seed were in every way identical in appearance, side by side on the same ground and under the same mode of treatment, and yet one would prove to be a prolific bunch and the other an immense runner. One would early ripen its fruit, while the other hardly produced, late in the season, seed enough to replace those sown. Varieties are greatly modified by latitude. Seed grown continuously in Louisiana are apt to adapt themselves to this latitude and spend a large part of their energies in making vines before putting on fruit. The same seed grown in Virginia continuously will make less vine and mature their fruit in a shorter time, adapting themselves to their environment, *i. e.*, will become acclimated. If seed of this variety, taken both from Louisiana and Virginia, be sent to a more northern latitude, it will probably be found by cultivating them, that the Virginia seed will produce less vine and give fully matured fruit, while those from Louisiana would spend their energies in making vines only. Such results have been noted by several of our experiment stations.

In the far South time of planting largely modifies the time of maturity and the tendency to vining. It is a common but truthful saying, that if vines are desired, peas should be sown early; if seed, quite late. Hence the sugar planters of Louisiana, who systematically follow a prescribed rotation of crops with corn and peas as one of the courses, frequently seriously injure the corn crop in order to secure an early crop of peas, and thus obtain a heavy crop of vines for turning under in August and September preparatory for a crop of cane. The same peas planted in July or August will make small vines but a good crop of peas (seed). Since the time of maturing constitutes one of the characteristics of varieties, it is easily seen how varieties may thus be multiplied.

Varieties are thus distinguished by the form, size and color of the seed, by habits of growth as to vines or pods,

time of maturity and color and size of pods. When the peas are closely packed in the pod, giving them a rounded form, and the pod conforms to the shape of the bean within, giving it when viewed in a perpendicular position, a sinuous outline, the varieties are styled "crowders," the simple meaning of which is that the seed are crowded in the pod. When the seed are somewhat flattened, rather kidney-shaped, and are not so closely crowded in the hull, the latter not showing distinctly the outline of the enclosed seed, they are called "kidneys." Perhaps varieties and possibly species are better differentiated by these characteristics than any other. The color of the seed is perhaps more diverse than any other characteristic. Given the three solid colors, white, black and red, and the combinations which can be made from them are almost countless if care be taken in completely differentiating them. Hence cow peas with many colors, white to black through red, and their combinations, are obtainable. Color is a feature of cow peas, which can easily be modified by selection. In nearly every lot of clay peas will be found light and dark shades of cream. The author once separated these, and by continued separate plantings obtained on the one hand a pea approaching white in color, and on the other nearly red. A large majority of the varieties are white wholly or in part.

The size of the pea may vary from very large to very small, and yet some varieties growing very large seed in one place, may produce a medium pea in another, the change being superinduced either through soil or climate, or both.

So too with size of pods. As a rule the crowders are shorter than the kidneys, but the length of either is greatly modified by environment. The prevailing color of the hulls of cow peas is straw color, yet several varieties are now grown with decidedly colored pods. Accidental variation was doubtless seized upon, and by careful selection and propagation, a permanent variation obtained.

The habits of growth are no constant, as above shown, even in the same variety. Yet it is well known that under the same



circumstances, different varieties will vary greatly in behavior. Some will be immense "trailers," running flat on the ground for twenty feet (as the "conch"). Some will start off erect, then begin to run, making finally a large quantity of vines. While others will shoot up erect, and from erect stems send off fruit. Hence the farmer usually denominates them as "trailers," "runners" or "bunch." While the habit of growth is not an unerring characteristic of variety, yet it serves our purpose of classifying the tendencies of varieties. I have never seen the "conch" pea otherwise than a trailer, nor the "pea of the backwoods" anything but a bunch.

Upon the habits of growth depend largely the successful mowing of pea vines by the mowing machine. Trailers are difficult to mow with an ordinary mower. Runners present some difficulties but may with care be accomplished. While bunch peas are as easily mowed as timothy grass.

Time of maturity is a very varying factor, modified largely by time of planting, character of soil and latitude. Yet varieties are so indelibly impressed with differences in times of maturity, that they exhibit these characteristics for a long time, until bred out of them by modifying environments. It is usual to speak of "very early," "early," "medium," "late" and "very late" varieties. These terms are full of meaning for varieties grown locally and thoroughly acclimated. But for use in Northern latitudes they are, as already explained, comparative only.

#### COW PEA HAY AND SILAGE.

From the above it may be seen that pea vine hay may be good, bad or indifferent, the quality depending largely upon the variety of pea, time of harvest and care in curing.

When properly harvested and cured it is a most excellent food for stock, and it is the equal of red clover hay which is so largely used in the North. At the Delaware Station the yield of dry pea vine hay per acre was 2353 pounds and the Director compares it with the very best winter wheat bran as follows: 2353 pounds dried pea vines contain 58 pounds fat, 147 pounds ash, 320 pounds

protein, 1596 pounds fibre and carbohydrates, and 232 pounds moisture. The same quantity of wheat bran contains 98 pounds fat, 120 pounds ash, 296 pounds protein, 1272 pounds fibre and carbohydrates, 214 pounds moisture. "The bran leads in fat, but in all other respects the dry matter in the vines excels. It was found that with pea vines in a ration bran could be dispensed with." "The butter yields were slightly increased by its use without impairing the quality." The vines can be cured into hay or be preserved as silage. Either as hay or silage it is highly relished by stock. This is universally admitted except by the Kansas Station. "Three varieties were grown but the stock would not eat the vines green, cured or ensilaged. The crop possesses no value for Kansas farmers, unless possibly when used as a green manure." Rept. 1889, page 42. Per contra, the stations in Connecticut, New York, Pennsylvania, Delaware, Rhode Island and Mississippi, speak of the avidity with which the stock ate it either as hay or silage. Every Southern farmer highly appreciates the forage from this plant, and in Louisiana it furnishes the bulk of the hay used upon the plantations. Besides the hay crop, this plant, if the proper variety be used, and is planted (at the South particularly) late enough, will yield a crop of berries which are extremely valuable as a concentrated food for man or animals. The Georgia Station reports the yield per acre of one variety (Quadron) as high as 41.6 bushels, with a number of others over thirty.

#### COW PEAS AS A SOIL RESTORER.

Valuable as this plant is for its vine and fruit as food, its superlative excellence lies in the property which it has of restoring worn soils. This property it shares with all leguminous plants, but it surpasses them all in producing the maximum results in a minimum of time. Clovers, trefoil, lupins and alfalfa are used in different countries as soil renovators. They are planted in the fall or spring, and occupy the ground the entire season or longer for good results. In the South the cow pea is planted in the late spring or early summer, and



the crop of vines or peas are harvested or buried for fertilizing purposes in early fall. The growth and development of this plant is both rapid and enormous, particularly when planted on good land. It perhaps assimilates more plant food in a short time than any other leguminous plant.

This plant, in common with all others of the pulse family, assimilates the nitrogen of the air, and if phosphates, potash and lime be present in the soil, it will grow with great rapidity and luxuriance. The manner of assimilation of nitrogen has recently been patiently investigated by scientists, and while the exact process by which it is accomplished is not yet clearly understood, the primary cause is clearly shown. If a farmer will pull up carefully with its roots a pea vine plant from his field, and examine closely each rootlet, he will, if he has selected a healthy growing specimen, find each one covered with wart-like protuberances or tubercles. These tubercles, if examined under a powerful microscope, will be found filled with micro organisms of bacteria. They are living on the plant and are drawing from it the mineral matter requisite for their existence. Simultaneously however, they are assimilating the free nitrogen of the air which reaches them through the porosity of the soil. These bacteria have a very ephemeral existence but great facility for rapid multiplication. Hence millions die every few moments and are absorbed and appropriated by the growing plant. This living together of the plant and its seeming parasite, each acting as a purveyor of food for the other, is a most remarkable discovery made almost simultaneously by Dr. W. O. Atwater of this country, and Hellriegel of Germany. While it has long been known that leguminous plants had these nodules on their roots, and longer still that they were in some way nitrogen gatherers, and therefore soil improvers, yet the relations between these nodules and the plant were determined only a few years since by these distinguished scientists.

These organisms are believed to live in the soil, and there are strong reasons

for believing that each kind of leguminous plant has its own peculiar bacterium. Hence it is sometimes found necessary to "inoculate a soil" before it will grow successfully certain legumes. This is accomplished by applying a light dressing of the soil in which the legume has been successfully grown, or by sprinkling it with an infusion from that soil, or better still with an infusion of the roots (with their tubercles) of the plant which you desire to grow.

Even a soil which is "too poor to grow cow peas" may by inoculation be made to produce a fairly good crop. Having once inoculated it better crops of peas may each succeeding year be grown. It is possible that the excellent results obtained from a crop following a pea or clover crop, even when the entire growth above ground has been removed for hay, are largely due to the immense number of bacteria left in the soil by these crops. With the chemical composition of the pea plant and the knowledge of the facility with which it draws its nitrogen from the air, one can readily appreciate the advantages to be derived from growing a crop of cow peas.

#### ADVANTAGES OF THE COW PEA CROP.

(1) It is a nitrogen gatherer; (2) it shades the soils in summer, keeping them in a condition most suitable to the most rapid "nitrification" and leaves them friable and loose in the best condition for a future crop; (3) it has a large root development and hence pumps up from great depths and large areas the water and with it the mineral matter needed by the plant; (4) its adaptability to all kinds of soils, stiffest clays to most porous sands, fertile alluvial bottoms to barren uplands; (5) it stands the heat and sunshine of Southern summers; (6) its rapid growth enables the farmer in the South to grow two crops a year on the same soil; (7) if sown thickly, will by its rapid growth and shade, effectually smother all weeds and thus serve as a cleansing crop; (8) it is the best preparatory crop known to the Southern farmer, every kind of crop grows well after it; (9) on the alluvial lands of the Mississippi bottoms, it serves to pump off excessive water, evaporating it through its great foliage,



thus keeping the soil in a condition for most rapid nitrification during the entire growing season; (10) it furnishes a most excellent food in large quantities for both man and animals.

With all of these advantages, it is no wonder that it is called the "clover of the South," and were it used regularly throughout the South as one of the crops in a regular but short system of rotation, the soils of this section would soon rival in fertility their primitive conditions.

A few results taken from the bulletins of the different experiment stations will show the large accumulations of nitrogen made by this crop upon an acre of soil. There is also given amounts of phosphoric acid and potash contained in the crop gathered from the soil and subsoil.

Louisiana Sugar Station obtained 3330 pounds dry matter in the vines and 1040 in the roots from an acre. The former contained 56 pounds nitrogen, 16 pounds phosphoric acid, and 92 pounds potash, and the latter 8½ pounds nitrogen, 4½ pounds phosphoric acid and 110 pounds potash.

At the North Louisiana Experiment Station twelve varieties of peas have been grown for three years on the same land and entire amounts of vines, peas and roots harvested, weighed and analyzed. The average of the best for the three years are as follows, per acre:

	Nitrogen, lbs.	Phosphoric Acid, lbs.	Potash, lbs.
Black.....	96	19½	81½
Unknown.....	88	17	78
Indian.....	79	18	63½
Red.....	70½	17	65
Clay.....	64	14½	53
Whippoorwill.....	55½	10½	40½

In Alabama the average yield per acre of vines gave 115½ pounds nitrogen, 39 pounds phosphoric acid and 89 pounds potash, and of roots, 7¾ pounds nitrogen, 7 pounds phosphoric acid and 39 pounds potash, or a total of 123¼ pounds nitrogen, 46 pounds phosphoric acid and 118 pounds potash.

In Connecticut the Storrs Agricultural Station gives for the total plant, including roots, 90 pounds nitrogen, 23

pounds phosphoric acid and 75 pounds potash per acre.

In Rhode Island for the black peas the total crop of green vines per acre was 35,003 pounds, containing 157 pounds nitrogen, 32.2 pounds phosphoric acid and 109½ pounds potash. Assuming the roots to be one-fifth of the dry matter of the vines, and using the analysis given by Storrs Agricultural Station, the director estimates an addition to the above of 17¾ pounds nitrogen, 5.15 pounds phosphoric acid and 10 pounds potash for the fertilizing ingredients of the roots in order to obtain the true manurial value of an acre of cow peas.

Arkansas reports the presence of 68 pounds nitrogen, 14 pounds phosphoric acid and 50 pounds potash in a crop of peas grown upon an acre of land.

South Carolina reports the yield of 3.6 tons of dry matter to the acre, containing 205 pounds nitrogen, 33 pounds phosphoric acid and 155 pounds potash.

Other yields might be given, but these suffice to demonstrate the fertilizing value of the cow pea. The average of the yields of the six States given above is 122 pounds nitrogen per acre. If it be assumed, which is doubtless true, that the larger part of this nitrogen comes from the air and is therefore a direct addition to the fertility of the soil, one can easily calculate the money value of this addition.

Nitrogen is the most costly of all the ingredients of fertilizers. It is also the most fugitive element of our soils, being washed out by rains and removed largely by grain crops. The average price paid for this element in commercial fertilizers by the farmers of this country is not far from 15 cents per pound. Using this as our factor the money value of an average pea crop, measured by its nitrogen contents alone is over \$18 per acre. In many instances it far exceeds this sum. No account has been taken of the phosphoric acid and potash present, since those come wholly from the soil, but by transferring them from greater depths to the surface soil, which is accomplished when pea vines are turned under as a fertilizer, they are made immediately available for the suc-



ceeding crop, and to this extent has added to the money value of the pea crop.

In the experiments at the North Louisiana Experiment Station with different varieties, it was found that the proportions of fruit to vines varied from 10 to 25 per cent. in the running varieties to 60 to over 100 per cent. in the bunch. The percentage of roots to vines depended also upon the character of the variety. The running varieties averaged about 20 per cent., while the bunch ran from 33 per cent. up to 100 per cent., the amount depending entirely upon the bunchiness and prolificness of the variety. The percentage of peas to hulls was more constant, varying between the limits of 70 and 76 per cent.

The moisture in green pea vines may be assumed without much error to be 85 per cent. of its weight, leaving 15 per cent. of dry matter. The growing vine may be roughly estimated to contain 0.40 per cent. nitrogen, 0.07 per cent. phosphoric acid, and 0.30 per cent. potash. The yield of green matter varies with soil and variety, but yields of over 20 tons per acre are recorded.

The pea vine hay, if cured with leaves on and from one of the running varieties, will contain approximately the following percentages: Nitrogen, 2 per cent.; phosphoric acid, 3 per cent., and potash, 1.5 per cent.

Therefore an easy calculation of the approximate value of the fertilizing effects of a crop of pea vines can be made by using the above figures after the weight of green or dry matter to the acre is obtained.

#### ROTATION OF CROPS.

Every system of profitable farming must sooner or later consist of a rotation of crops with at least one renovating crop in the cycle. The enlightened agriculturist of every country is on the lookout for a valuable leguminous crop, which will be an addition to his fields and his system. The sugar planters of South Louisiana very generally practice a rotation of sugar cane, corn and cow peas. The rotation is not violated even when the peas are extremely high in price. They find that no other crop or fertilizer can compare in results with the

cow pea. By turning under the vines with heavy plows in August or September, the ground is in most excellent condition for the planting of cane in October. Thus the fertility and productivity of his soils are maintained. But the cotton planter as a rule has no rotation. Cotton follows cotton, with an occasional change to corn, and with the regularity of the seasons. Under this exclusive culture of cotton, much of the lands of the Southern States have become so depleted in fertility and so deprived of humus as to render uncertain the profits to be derived from its cultivation. Remunerative returns for the labor and expenses of cultivation are rarely received. It is therefore a question of paramount importance to every patriotic citizen, how to restore these worn and tired soils. Can these seemingly exhausted soils be restored to their primitive fertility, and at the same time return each year a fair remuneration for the labor and expense involved in the accomplishment? Several stations reply most positively in the affirmative.

Arkansas station gives results showing that "a rotation of crops, including the cow pea, will maintain and restore fertility to worn soils, without the use of any kind of manure and at the same time with a profit." It shows also, that "the vines turned under increased the crop of cotton over the plat from which the vines were removed for hay." "It was more profitable however, to feed pea vine hay (with cotton seed) to stock, and return the manure to the soil, than to use the vines directly as a fertilizer."

Extensive experiments at the State Experiment Station, Baton Rouge, La., and at the North Louisiana Experiment Station, Calhoun, covering a rotation of oats, cow peas, cotton and corn and cow peas, with and without appropriate fertilizers, extending over six years, have been made and the results published in bulletin form. They have conclusively shown that the poorest lands of this State can easily be renovated by above rotation, and more rapidly in connection with the use of fertilizers. Fair profits may be realized each year by the adoption of the latter system of rotation. The Georgia Ex-



periment Station has tried a similar rotation, and finds such beneficial results as to commend the system to the farmers of that State.

Occasionally it may be found that the soil is too poor to grow even cow peas without assistance, and therefore it will be necessary to add mineral manures (phosphates and potash) at the time of planting. In fact it may be deemed wise to add phosphates, and perhaps potash to nearly all soils in conjunction with the planting of cow peas.

AVERAGE COMPOSITION OF THE PARTS OF THE COW PEA (AIR DRIED)

Part.	Water.	Nitrogen.	Phosphoric Acid.	Potash.
Peas .....	12.68	3.85	.91	1.45
Hulls .....	13.34	1.16	.36	1.23
Vines .....	12.03	1.94	.37	1.52
Roots .....	12.58	1.32	.43	1.52
Stems .....	.....	1.09	.34	2.25
Leaves .....	11.05	3.01	.22	1.12
Leaf stalks .....	9.64	1.01	.49	1.34

From the above it will be seen that the nitrogen predominates in the peas and in the leaves, while potash is most abundant in the stems. Therefore in curing pea vine hay, great care should be exercised to harvest as many leaves as possible, since their loss depreciates greatly its value as food and increases the stems with a superabundance of potash and deficiency of nitrogen. This excessive potash in the stems of pea vines also suggests most careful pains in curing them, since fermentation may easily develop "nitre" (nitrate of potash) in the vines which may in excessive quantities have serious effects upon the kidneys of work stock.

The variety of cow pea therefore furnishing the largest amount of nitrogen is best suited for both hay and as a soil improver, and an inspection of above table will show that that variety must have an abundant foliage, since the leaves are richest in this ingredient. If, however, beans or peas be sought with an early maturity, then the Speckled, Blue, etc., may be the more desirable varieties.

All varieties of cow peas bearing much foliage are late in maturing, therefore

for forage and green manuring they should be planted early to secure maximum results.

SHALL PEA VINES BE TURNED UNDER OR HARVESTED OR FED?

Experiments have been made by the Georgia Station for two years to determine the most economical disposition of the pea crop. To this end three series of plats were prepared and all of them fertilized alike with 200 pounds acid phosphate per acre, and planted in cow peas. On the first series the vines were permitted to ripen their peas and these were removed and the dead vines turned under in November. On another series the vines were turned under when in full luxuriance of growth. On the remaining series the vines were cut at the proper stage and made into hay. Credit was given for the peas picked and hay removed. The next year the entire plat was put in cotton and treated alike and the results of the cotton from each series carefully and separately weighed and valued. While both the green vines and dead ones from which the peas were picked gave in their order increased yields of cotton over the series from which the vines were removed for hay, yet the money value of the results, including value of peas and hay removed, were strongly in favor of the last series. The following are the conclusions of the Director for the two years:

"The two experiments agree with remarkable closeness, and the results may be accepted as conclusive. Therefore, the 'conclusions' reached as the result of the first experiment are confirmed and adopted as follows:

"(1.) That the best disposition of a crop of field peas is to convert the vines into hay.

"(2.) The next best is to permit the peas to ripen and gather them (or pasture them).

"(3.) Turning the pea vines under green gave the poorest economic results.

"Note.—It may be truly said that the practice of turning under a crop of cow pea vines—ready for the mower, and in a few days for the barn and for the cattle—has no more reason to sustain it



than would the practice of turning under a crop of wheat, oats, corn or cotton at its most vigorous stage of growth. Nearly every form of stock food would be a valuable and effective fertilizer if applied immediately and directly to the soil; but the farmer, in an economic sense, can no more afford to manure his soil with a crop of pea vines that are ready to mow, than he can to sow good, sound wheat bran on his land as a fertilizer."

Similar experiments have been made at other stations with like conclusions. It may therefore be assumed that the best economy suggests that where live stock are present in sufficient numbers to consume it, that the pea vines be made into hay and fed, and the resultant manures carefully returned to the soil. Elsewhere will be found the high feeding value of both vine and peas, both of which are possessed of high digestion coefficients. Experiments made at the North Carolina Station with pea vines, established the following digestion coefficients, viz.: Dry matter 59.2 per cent., protein 64.5 per cent., fats, 50 per cent., carbohydrates 70.7 per cent., fibre 42.9 per cent., ash 45.1 per cent., which are, with the exception of fibre, much higher than the coefficients given for red, crimson or Alsike clovers. The pea, like all concentrated foods, has enough coefficients of digestion.

If, however, there are not enough stock to consume the vines, they should be turned under. The proper time for doing this will depend largely on the character of the soil and the exigencies of the farmer. If a winter crop is to follow, they should be turned under on all soils early enough to insure partial decomposition by the time of seeding. If a spring crop is to follow, and the soil is stiff and clayey, they should be turned under in the fall and the land thrown into high rows, permitting surface drainage, so as to receive the beneficial physical effects which the winter under such conditions will produce. If the land be porous and sandy, but level, it is probably best to leave them to decay on the surface, since the loss thereby (shown by the Alabama Station

to be great) is believed to be even less than will occur by plowing them under in the fall and subsequent winter leaching. If the land is rolling, they should by all means be turned under in the fall.

But the truly scientific disposition to make of pea vines destined for the soil on all character of lands, is to turn them under in early fall and occupy the grounds at once with a winter crop of grain (oats, rye, barley or wheat) or some of the clovers or grasses. From an economical standpoint, this course should be pursued, even though the winter crop had itself to be plowed under for some spring crop.

#### SUMMARY.

1st. The origin of the cow pea was doubtless India, where to-day many related species are grown.

2d. All the varieties of the cow pea now cultivated in the United States are believed to have originated from one ancestor "*Vigna sinensis*," and that the numerous so-called varieties can be greatly reduced in number.

3d. The best varieties of peas for vines and green manuring are the Unknown, Black, Clay, Red, etc., while the strictly bunch varieties, Whippoorwill, Blue, Black-Eye, etc., give larger returns in peas.

4th. The composition of peas and pea vine hay exhibits large feeding values, as well as high fertilizing properties.

5th. Cow pea vines can be converted into hay or preserved as silage, both of which have proven by repeated experiments to be palatable and nutritious food for farm stock.

6th. The cow pea occupies the front rank among the leguminous plants as a soil restorer, enjoying largely the common property of this family of utilizing the free nitrogen of the air; an average pea crop accumulating over 100 pounds of nitrogen per acre.

7th. A rotation of crops is imperatively demanded by scientific agriculture, and any system of rotation in the South which omits the cow pea, is an egregious blunder.

8th. A three years' rotation with five crops, two of which are cow peas



especially with appropriate fertilizer for each crop, has been found most effective in building up worn soils.

9th. The proper disposition to make of pea vines is to convert into hay or silage and feed to stock, carefully returning the manure therefrom to the soil. The digestive coefficients of peas and pea vine hay are high. In the absence of stock to consume the hay,

the vines should be turned under.

10th. The proper time to turn under vines will depend largely on soil and exigencies of the farmer. True economy would dictate the turning under in the early fall, and the sowing of the ground later in some winter crop, small grain, grass or clovers, and these in turn to be buried if a spring crop be desired.

## GRASSES AND FORAGE PLANTS IN THE SOUTH.\*

When the Northern man first comes to this part of the country he misses the timothy meadows and the blue grass pastures to which he has been accustomed, and because he does not see them, too often jumps to the conclusion that this is not a grass-growing country, that our cattle must be grazed on broom-sedge and blum bushes, and that all of our hay must be imported. Gentlemen, if you have come to any such conclusion, you were never more mistaken in your life. It is true that we do not have the broad meadows and hay fields such as we see in the North, but it is because we do not need them, because we can cut hay—and good hay too—on almost any of our lands, and at almost any time during eight months of the year. In the North the farmer can grow no other crop on the land where he cuts his hay, but here we can, and do, cut from two to three tons per acre on land from which oats, wheat or some other early crop has been harvested; and this without even the expense of plowing or seeding. Some years ago, when I had seen less of Mississippi grasses than I have now, I urged one of my friends, an old Illinois farmer, to plant some of the common cultivated varieties of the North, and even offered to furnish him with the seed if he would do so. His reply was that he did not want the seed and could not afford to plant it. He said: "Last year I had twenty acres of cucumbers in my peach orchard, and

after harvesting the crop I kept the ground clean around the trees and then cut from the field thirty-five tons of as fine hay as I ever used, and that is good enough grass for me." Of course he was right in declining my offer, for his hay cost him absolutely nothing but the harvesting.

We can grow grass as cheaply and easily as it can be done anywhere in the world, but we have not yet learned to use and to sell it as well as have our Northern friends. We can cut from two to four good crops on such land as we give to hay-growing, and can make one good crop on any of our lands, even our cultivated corn and cotton fields giving us a good yield of peavine hay if we take the trouble to plant the seed.

With a climate, soil and conditions so widely different from those of the North, it follows very naturally that we should grow different kinds of grasses from those found in the cooler and drier regions of the Northern States; and we have a much wider range from which to select. Minnesota has about 140 species of native grasses, Missouri 150, Illinois about the same, New Jersey 165, while Mississippi has more than 200, and the proportion of clovers and other forage plants is fully as large.

With us, Bermuda is the staple sort for both hay and pasture. It grows well all through the South, will make from two to four tons of hay per acre, and the hay is fine, tender and nutritious. During the summer it gives the best of pasture, and is uninjured by the longest drouths. At the Experiment

\*Address delivered at the Interstate Agricultural and Horticultural Convention, held at Jackson, Miss., February, 1892, by Prof. S. M. Tracy, Director of the Mississippi Agricultural Experiment Station.



Station we have been feeding with both Bermuda and timothy hays during the last three years, as a test of their feeding values. The timothy was selected especially for the purpose by a man who ships that hay very largely, and was of the very best quality; the Bermuda was purchased from a neighboring farmer. Without going into the details of the trial I may state, that ton for ton, we found very little difference between the two, though the balance was slightly in favor of the Bermuda. As the timothy cost, delivered at the Station, nearly twice as much as did the Bermuda, the balance of profit was very decidedly in favor of the home-grown hay.

Johnson grass makes excellent hay, and will give from three to four cuttings a year. While thousands of dollars have been made by its cultivation, and it grows well on almost any kind of soil, it will never be popular, as when once planted, it "sticketh closer than a brother," and it is difficult to grow any other crop on the land.

Timothy, the stand-by for the Northern hay growers, is of no value here, but crab-grass, that pestiferous garden weed of the North, seems to change its character when it crosses the Ohio river, and here it is a valuable plant, making its growth late in the season after other crops are laid by, and yielding from one to three tons of hay per acre, which is fully equal to Timothy, and which costs nothing for seed, cultivation or rent.

Red clover grows as well here as it does in New York or Wisconsin, and we are learning to appreciate its value for fertilizing purposes as well as for hay. At the station our yield of red clover for the last two years has averaged a little over three tons per acre, and we have usually cut a third crop of other grasses from the same ground in addition.

We are learning that we can grow our fertilizers cheaper than we can buy them, and I know of no soils which respond more quickly to green manuring than do those of this State. For this purpose we are using a number of different plants, red clover, cow peas, lespedeza and melilotus being among

the best, as they all give paying crops of hay, and pay many times their cost in their improvement of the soil. Melilotus, the old "sweet clover" of the North, is of comparative recent introduction, but on all lime soils it makes a wonderful growth of forage, and is decidedly superior to red clover in its fertilizing value. Lespedeza is the standard clover plant of the South. It will grow on the poorest and driest soils and, pound for pound, is the best hay I have ever used for fattening or for milch cows. Three years ago last October, our barn containing the hay we had stored for winter use was destroyed by fire. The last of October is late for making hay, even here, but on the day after the fire we put our mowing machines into a field of lespedeza which we had before thought hardly worth the cutting, and in two weeks we had stored a fresh supply of hay, mostly lespedeza, but with a liberal mixture of asters, golden rods, and plum bushes; but even this hay gave us better results in milk and butter than did equal weights of imported timothy.

Chicken corn, a kind of sorghum which has become naturalized in a large part of this State, yields an immense amount of excellent hay when cut before it is grown too large. It makes its growth quite late in the season, principally in September, and frequently takes possession of a field from which red clover has been cut. We have cut three tons per acre of this hay from land from which we had already cut two good crops of clover, without apparent injury to the growth of the clover the next season.

There is no lack for pastures during the summers, and with a little care they may be made to last nearly the whole winter also. Orchard grass, red top, and rescue grass grow well here, and all remain green and fresh through our coldest weather. Our native canebrakes winter—after a fashion—thousands of cattle annually, and with the first warm days of spring the vetches, melilotus and lucerne, give excellent grazing.

And so I might go on indefinitely,



but life is too short for me to describe all the good grasses and forage plants with which we of the South have been blessed, and I have already said enough to show that we can have an abundance of both hay and pasture at a merely nominal cost.

Northern men have tried to impress us with the idea that good hay can be made only from timothy and clover, and that these can be grown only north of the Ohio river. We used to believe that, and to pay them enormous prices for poorer hay than that which we did not take the trouble to cut from our own plantations. Perhaps we were able to do that in the old days, but six cent cotton cannot be grown profitably on twenty dollar hay, and we have learned to do better. We have learned that our home-grown hays are equally good, and that they can be grown for less than half the cost of the imported article. A few years ago it was a common sight to see trainload after train-

load of Iowa and Illinois hay coming South, but we rarely see that now, and the shipment of hay to the North is becoming an established business. Since I came to this meeting a gentleman who lives on the line of the Illinois Central Railroad has told me that ten years ago there were not twenty tons of hay put up in his neighborhood, but this year eighty cars were shipped from his station to Northern markets. And so it is in nearly all parts of the South. It has taken us a long time to learn the value of our native pastures, and still longer to learn what grasses to grow for hay, but we have learned these, in part at least, thanks to such men as Montgomery, and Stewart, and Odeneal, and now grass growing, with its natural accompaniments of stock raising and dairying, has become one of the most profitable, and certainly one of the most rapidly growing industries of the State.

## THE SCUPPERNONG GRAPE.

The scuppernong is, with a few exceptions, the only variety cultivated of the *Vitis Rotundifolia*, the Muscadine type. It is not hardy above the 35th degree of latitude, except in the eastern part of North Carolina and the southeastern corner of Virginia, where, on account of nearness to the coast and the Gulf stream, vegetation is identical with that of lower latitudes; hence it is exclusively a Southern grape. It thrives anywhere in the far South, and is particularly at home in the light soil of the piney woods country bordering the Gulf of Mexico. It has been found growing in a wild state in Georgia. It is stated historically that the scuppernong was discovered on the Island of Roanoke in North Carolina by the colony of Sir Walter Raleigh, in 1554, and the original vine is said still to exist there, being over 300 years of age.

Certainly, it has no more congenial home than this region.

In appearance, wood, fruit and habits, the scuppernong is entirely distinct. The bark is smooth, of grayish-ashy color, variegated with many small, dot-like specks of lighter hue; the wood is hard, close-textured, firm; the roots white or creamy. The leaves, before dropping in autumn, become of a brilliant yellow. The vine is a profuse bearer, but not at first a rapid grower. While a Niagara or a Concord will give a fair crop in this section the year after planting, not much fruit need be expected from the scuppernong until after it is three years old, and it gradually increases in productiveness with the growth of the vines. There is probably nothing else in the whole horticultural world that will produce an annual crop with so much certainty, both as to quantity



and quality. They are the only grapes known in the world that are exempt from insect troubles and diseases. Five acres can be cultivated as easily as one acre of other grapes. They bloom too late to ever be caught by the frost.

A vineyardist of Alabama describes the growing and training of the scuppernong, as follows:

"When two years old, the vine is planted beside a post, which, with crosspieces nailed on top, will carry the vine for a year or two; then the never-ending work of building the arbor commences. Four posts, eight to ten feet apart, are set in a square about the vine. These posts extend some eight feet above ground and have poles spiked from top to top. On these poles light rails, split from some durable wood, are placed two feet apart. As the vine creeps out over these rails, new rows of posts are set outside, with more poles and rails, until six to ten years after planting, the arbors touch one another, and the vineyard is one great arbor. A successful vineyardist of Mobile county, Alabama, after trying various distances up to fifty-four feet apart, has settled on forty-eight feet as the best distance for vines. The vines would cover the arbor when planted fifty-four feet apart, but it was too much work to keep up so much arbor."

Another grower, residing in Scranton, Miss., favors the "Southern States" with the result of his experience, as follows:

"In planting a vineyard upon new, long-leaf pine land, it is best to precede with a crop of cow-peas and an application of thirty bushels of slaked lime per acre; 700 pounds of fertilizer, containing 9 per cent. phosphoric acid and 14 per cent. of potash, the cow-peas, planted between the rows, supplying nitrogen. It is advisable, however, in order to secure success in years to come, to apply to the vineyard twenty bushels of slaked lime every five years during the winter months. If no leguminous crop be raised, 200 pounds of nitrate of soda

may be used to produce the same result.

"Although the scuppernong is propagated mostly by layers, it has been proved that cuttings also can be rooted; but they should be replanted and set the following winter to form more roots. Good prepared plants can be had from nurseries, but it is preferable to purchase in lots, saving expense and labor, the nursery's scuppernong being already firmly rooted. The vineyard should be laid out forty by forty feet, giving twenty-seven vines to the acre. For various reasons, plant as a pear orchard. On the Gulf coast we plant as follows: Dig a hole six feet in diameter and one foot deep, placing a stick ten feet in length in centre of the hole; lay four inches of surface earth in the hole, covering this with a layer of pine straw. If straw is not obtainable, seven pounds of stable manure will answer the purpose. I prefer cottonseed meal, because it gives the plant an impetus, being an excellent fertilizer and bearing almost immediate results. The stem of the scuppernong should always be planted on the south side of the stake. The vines or branches are now laid in and spread all over the hole in the same manner as the roots. Cover the vines with a layer of earth, so as to form roots. Arrange so that the top vine is one inch out of the ground; from this the new vine is raised. On the Gulf coast the scuppernong can be planted from November until the 15th of April. As soon as shoots appear on the vine, remove all excepting the topmost shoot, and continue removing shoots until it is eight inches high; then tie to the stake which has been set in the middle of the hole. As branches form, rub off the buds, thus increasing the growth of the plant. Be careful, however, to let the topmost bud grow, and when the vine has attained the height of eight feet, two branches are allowed to grow in opposite directions—one north and the other south. The scuppernong naturally grows southward. In the



meantime, while the vine is growing, I do not neglect arboring. A line of posts is set twenty feet from the outside of vine and twenty feet apart, nailed together with lumber (one and one-half by six). Instead of wood on the top of arbor, I use No. 12 galvanized wire, stretched two feet apart. The two leaders of the vine are trained to run diagonally over the arbor, and from these cross leaders are grown, about fifteen inches apart, and again all buds are removed excepting the topmost. This process adds vigor to the growth of the vine. It is carefully tied to the wire to prevent the crown from malting. Having been properly planted, fertilized, trained and nursed, these leaders should cover over ten feet square before the leaves fall in autumn. In the second year the vine covers from seven to nine feet in all directions. The fruit is formed on the old wood, the current shoots not bearing. The wiring should be continued until the whole space is covered with fruit wood and leaders, until the vines meet one another and a solid arbor is formed."

The grapes do not grow in bunches, but singly or in small clusters, scattered all over the vines. They are very large, being often an inch in diameter and are exceedingly fragrant. The skins are thick and the pulp is remarkably sweet and palatable. When ripe, the grape parts from the stem just as the orange does. The crop is harvested by stirring the vine with a pole, the berries and leaves being caught on a sheet spread below. The Mississippi authority quoted above gives this method of harvesting a vintage:

"Sheets of unbleached cotton are fastened to the four posts surrounding the vine and suspended midway between the arbor and the earth. The wire is shaken with a hook, and the ripe grapes are not injured by falling upon the sheet. The main point in favor of shaking with the hook is to secure the ripe fruit only and to get it quickly. The grapes are next taken to the separator, which is a cloth four-

teen feet in length and two yards in width, placed over rollers fitted up with set screws to stiffen the cloth. The rollers are placed under a wooden bed with flanges six inches in height on the sides, the rollers being so placed that the cloth will just run clear of them, the bed to take up the weight. The roller on the upper end, provided with a crank, is six inches in diameter and flush with flange. The roller bed stands on a decline of three feet; it is set in operation by turning the crank or pulley forwards and backwards, separating the refuse from the grapes, which are left cleaner than if they had been picked by hand."

The same authority continues: "I will give the actual cost of planting twelve acres and arboring five acres. A 20-foot arbor for vine rows of five acres requires 1200 feet of No. 12 galvanized wire, at \$36; 600 posts, \$15; 3000 feet of lumber, \$30; nails, \$2.50; labor, \$21; the cost of planting per vine, including fertilizer, plant and labor, 55 cents."

There are many profitable ways of utilizing these grapes. For making into preserves and marmalades, they are especially adapted on account of the thick skins and the great quantity of pulp that adheres to the skin. They make as fine preserves as can be made from any fruit, and very much finer than can be produced from any other grape. There is no limit to the demand for scuppernong grape preserves wherever introduced, and the price is sufficient to afford a very large profit.

The use of unfermented grape juice has become so general among physicians of the North in cases of fever that there is always a great demand for it at a much better price than is paid for wine. The grape juice is kept fresh by bottling and sealing when hot. It is the nearest substitute for milk that is known in the vegetable kingdom, and a fever patient who is unable to take milk or other food, may have life and strength maintained for many days by the use of nothing but the grape juice, as it affords nourish-



ment as well as drink. A very great quantity of white wine vinegar can be made from an acre of these grapes and return a handsome profit.

The scuppernong will make as fine brandy as can be made from any grape in the world. It has also warm advocates among American wine-makers, as it makes a splendid white wine. The delightful fragrance of the scuppernong imparts an exceedingly pleasant bouquet to the wine. The fruit, though ordinarily deficient in sugar, is very sweet to the taste, owing to its having but very little acid.

If the grapes are placed in a cask with a false bottom, the juice that will run out without any pressure, will make a fine dry wine, if no sugar is added. About half of the juice can be secured in this way; the remainder should then be run through a wine press, care being taken not to crush the seeds. Both water and sugar may be added to the juice that comes from the press, and a delicately-flavored sweet wine will be the result.

I quote here some authorities and cultivators of the scuppernong:

P. J. Berckmans, of Georgia: "I could not say too much in praise of the scuppernong as a wine grape. It is one of those things that never fail. Of course, I do not compare it with the Delaware and other fine-flavored grapes; but the question is, Where, where shall we find a grape that will give us a profit? We have it in the scuppernong."

S. I. Matthews, of Monticello, Ark.: "The saccharine deficiency of the grape may be accounted for in a measure by the fact that the plan of training upon arbors excludes the sunlight and heat from the fruit, which it is the practice to gather by shaking down from the vines, whereby a considerable portion of but partially ripe fruit is obtained. And yet, according to some tests, the scuppernong has registered 88° on the (Oechsle) must scale, which would give 9 per cent. of alcohol. When it shall be planted on dry south hill sides, instead of on low moist bottoms; when it shall be trained

on trellises, where the sun heat, both direct and reflected from the ground, shall bathe the fruit and foliage, instead of upon tall umbrageous arbors, through which the sun's rays can scarcely penetrate, and when only the perfectly ripe fruit shall be carefully hand-picked, instead of being rudely shaken, and all berries that will fall gathered and pressed together, there will be little if any lack of sugar. But even admitting this deficiency, it is the only demerit of this variety, and can be remedied either by adding pure sugar to the must, and adding so much of the resulting syrup to the other as is needed, to bring it up to the proper standard. Moreover, the true scuppernong is the most productive and reliable grape for the South, and its cultivators plant therefore mainly of the scuppernong and its class."

A notable variety of the scuppernong species is the Thomas, discovered and introduced by Drury Thomas, of South Carolina, and thus described: "In color it varies from reddish purple to deep black; has a thin skin; sweet and tender flesh; is less in size than the scuppernong; makes a fine wine, and is superior for the table." Mr. Berckmans, of Augusta, Ga., describes it as follows: "Bunches from six to ten berries; berries slightly oblong, large, of a slight violet color, quite transparent; pulp tender, sweet, of a peculiar, delicate vinous flavor, quality superior to any of the type. Maturity, middle to end of August. Has but little musky aroma and makes a superior red wine. A spurious variety is sold under the name of Thomas; this is inferior in quality, and produces a deep, black-colored fruit of no merit whatever."

Other sub-varieties of the scuppernong are: The Eden, a very large black berry, with delicate Thomas flavor, often twelve to fifteen berries in a cluster; a profuse bearer. The James, originated by J. Van Lindley, in Pitt county, North Carolina; it is black, large size, good quality and very prolific. The Pee Dee, discovered on the Pee Dee river in South Carolina; a

sub-variety of the scuppernong, somewhat similar in color, but smaller; skin very tough, quality good, ripens one month later than scuppernong. The Tender Pulp, a black-skinned variety, with pulp dissolving, sweet, of second quality; maturity from middle of August to middle of September.

The latest of the dark-skinned varieties of this class is known as the Flowers. The berries are large, growing in clusters of ten to fifteen; black, sweet; ripens very late; hangs upon the vine until frost. Said to make a rich, red and delicious wine. Never fails to produce a crop, and is perfectly free from all kinds of disease. It is much esteemed in Georgia, Alabama and South Carolina on account of its lateness, as it does not come in until the scuppernong is gone. Mr. Berckmans says it is not quite as good as the scuppernong, and is about the same size.

A scuppernong hybrid, from whose seedlings valuable results were ex-

pected, was originated prior to 1877 by Dr. A. P. Wylie, of Chester county, South Carolina. Since the death of Dr. Wylie, however, it is supposed that the seedlings have all been lost. It is said that Professor Munson, of Denison, Texas, is experimenting on a number of scuppernong and Thomas hybrids with Herbemont, the vines of which are very thrifty and beautiful.

There is no limit to the possibilities for the profitable cultivation of scuppernong grapes. They succeed well on any kind of soil and in any location in the extreme South. It gives so little trouble in cultivation that it is called by some "the lazy man's grape." The vine takes care of itself. It is a very poor place in the South that does not have a scuppernong arbor of one or two vines. A negro cabin away off in the woods may not have so much as a "collard" patch, or even a fig or pear tree, but it will have its scuppernong arbor.





# THE SOUTHERN STATES.

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## THE SOUTHERN STATES.

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The SOUTHERN STATES is an exponent of the immigration and Real Estate Interests and general advancement of the South, and a journal of accurate and comprehensive information about Southern resources and progress.

Its purpose is to set forth accurately and conservatively from month to month the reasons why the South is, for the farmer, the settler, the home seeker, the investor, incomparably the most attractive section of this country.

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### An Outlet Necessary.

The South constitutes today a field for the expansion of certain congested conditions. It has ceased to be merely a desirable locality for immigration and investment, and become a necessity. The well-being of numberless communities existing in the United States requires a new promised land, and one that shall be free from the deadly mortgage taint that has permeated the West. They are looking for a new cry to replace the shibboleth that has led them so many weary leagues towards the setting sun, and which had for its foundation so few of those conditions which make life a pleasant and a profitable thing. Besides these people, who have migrated once and been disappointed, there are others,

and they may be counted by thousands, who have been waiting year after year for a suitable opportunity to make a move of some sort, but who have been discouraged by the occasional tidings, becoming latterly more frequent, of bad seasons, droughts, forclosures and catastrophes of various sorts, from what has hitherto been their only Mecca. Every passing season has augmented their discontent. They are, perhaps, living in an overcrowded district, where the opportunities to get ahead are discouragingly small, and where they feel that their constant effort to make a living bears indeed a naked existence as its fruit and nothing besides. The keen desire to own a home, the fascination of proprietorship, and all the other powerful incentives that are constantly inducing men to forsake the evils they endure and fly to others that they know not of, are at work upon these people, and all that has kept them at home is the lack of a place to go to that has not had its reputation torn to shreds by a long chapter of calamities.

There is still a third class of people whom it is reasonable to suppose will turn their footsteps in future towards the Gulf of Mexico instead of towards the Pacific. They, too, come from a congested and dissatisfied locality—the European States. Whether or not large numbers of them are wanted in the South will not be here discussed, but it may be laid down as a settled fact that large numbers of them will come, and among them will be found good, bad and indifferent citizens. The class who migrate are often, unfortunately, of an undesirable character. Among them there necessarily exist a certain number who have

apparently been born into the world for the idle purpose of consuming its substance. They are unpopular as new-comers, but they are unbearable at home. A change of scene and surroundings usually has the effect of exciting them to some desultory and spasmodic effort, which, while productive of no substantial result, is greatly preferable to the state of lethargy and irritation in which they ordinarily exist and which has made them a nuisance on their native heath. It is by the occasional opening of new fields for settlement, such as was done with the West in 1849, and which is now being done with that great but undeveloped section south of the Ohio and Potomac rivers, that discontent is alleviated, friction avoided and civilization advanced. The chronic malcontents we must expect, but we may confidently rely on their being followed, accompanied and even preceded by much more than their equivalent of useful and industrious citizens. A twofold advantage therefore becomes manifest in the recent exodus from the North and West to the South—an advantage to the first-named sections, inasmuch as they are able to get rid of many who were, by the force of circumstances, an incubus, but who will, under the changed and easier conditions prevalent in the Southern States, become prosperous and valuable citizens, and an advantage to the last-named section, in that it will receive what it so greatly needs, which is a material increase in its population, so that its wonderful resources can be properly developed. The South will take its chance with the undesirable portion of its new inhabitants, and trust to its fertility of resource and its intelligent methods to make something out of them. In its efforts to do this, it cannot but have the best wishes and cordial support of everyone. In fact, the South is asking for friendship and co-operation. It does not want to be envied because its day is beginning to come at last,

after a depression extending over a quarter of a century. It wants this great and glorious truth to be received as it should be, with universal approval and with a broad perception of the fact that its prosperity will not be hugged to its own bosom nor confined to its own people. It is with the understanding that its revival and success means the well-being of the nation that it is asking today for capital to build its factories and for hands to grasp its plows. There is no undertaking in which this whole country can unite with so much certainty of reaping a material and widespread benefit as in the upbuilding of the South. The leading men of the North have recognized this, and in many of them we may count our warmest friends, our most powerful advocates and our staunchest defenders. They know that in times past our faults have been magnified and our virtues belittled, and they are thoroughly pleased to see the era of prejudice pass away. But it is to the mass of the people that the South looks for its most valuable support. They must be shown that its growth does not mean injury to the North and West, but rather the amelioration of many of the strained conditions existing there today; that it means the enlargement of trade, the enhancement of values and the multiplication of opportunities. These people of the North and West have grown up surrounded by traditions that are none the less powerful because they are myths, and to overthrow them in a worthy cause would be a great and an honorable achievement.

#### **Dr. Depew's Observations.**

One night recently the Montauk Club, of Brooklyn, N. Y., gave a banquet in honor of the birthday of Chauncey M. Depew. This club, composed of the most prominent men of that city, of all parties, has for several consecutive years paid this tribute of appreciation to one of the most able, genial and versatile men of our country and age,



and has always been repaid with a speech worthy alike of the guest and his hosts.

At this time, Dr. Depew had been home but a day or two from a trip to the Pacific coast. The route going and returning covered more than 8000 miles of railroad travel. Dr. Depew is a keen observer; nothing escapes his notice; things that to many others would seem trivial, or of no account, are to him items of importance in forming an accurate and just judgment of the conditions of the country, its possibilities of development, its signs of progress. All these he groups together in his mind, and upon them he founds his conclusions. The people generally have the impression that Dr. Depew is an eloquent and exceedingly witty after-dinner speaker, who charms all that listen to him. But the hard-headed business men, the great capitalists, the leading financiers of the country, know that he is one of the shrewdest and most sagacious men of this era, and that the splendid manner in which he has managed the immense railway interests of the corporations that are united under what is commonly known as the Vanderbilt System is but one illustration of the practical power with which this eminent private citizen is richly endowed.

We refer thus to Dr. Depew as a fitting prelude to the speech he made at the banquet of the Montauk Club, in which he said, very briefly, some things that all interested in Southern development may study with profit to their section and to themselves. Referring to his journey, he said:

"I have been impressed during a recent tour of over 8000 miles with the fact that we, as Americans, know less about each other than we do about foreign countries. Almost any intelligent person whom you meet is familiar with the industrial and social conditions of Great Britain, France, Germany and Italy, and the knowledge of many of them extends to all the continents of the globe. Very few are familiar with the climatic, the agricultural, the industrial

or the commercial conditions and possibilities of the Gulf States, or of that vast territory which extends from the boundaries of Oregon and California over thousands of miles of arid plain, with some beautiful oases of cultivated land, up to the Missouri river. Our country is so vast in extent, and capital, labor and competition have become so concentrated in crowded centres, that we need a department of government to teach congested populations where they can find air, health, wealth and liberty. Why should miners be starving in one territory, when productive mines are calling for labor in another? Why should farmers, freezing in inclement climates, or with their barns, their houses, their fences and their stock blown to pieces by resistless blizzards, give it up and return again to the older settlements, when rich fields and alluring climates wait for and want them? In the thousands of miles of the great American desert ten millions of people could live in prosperity and happiness under a scientific system of irrigation—such a system as only the government could inaugurate. Strange as it may appear, the historian, in looking over our country and citing its benefactors, will give a place, and a good one, to Brigham Young. Having stopped his caravan in the Salt Lake Valley, with the mountains of snow encircling it and the alkali plains, hard and dry and unproductive, he saw that if he brought the water from the mountain and distributed it on the plain he could produce an earthly paradise for his co-religionists. He also discovered that the real secret of successful farming in a country of rich soil is the small farm, which the farmer and his family can look after personally and attend to in every detail. That principle has made Utah the most prosperous of the intermontane States, and Salt Lake its largest city. Governor Flower tells of a farmer from Jefferson county who settled in the Northwest. In narrating to the governor his experiences, he said that in order to resist the blizzard he built a snow fence four feet wide and six feet high. When the wind blew it over, then the 'darned old fence was six feet wide and four feet high.' I found this farmer in Texas, where he had gone with his neighbors. They had demonstrated that rice could be profitably raised upon hitherto

almost worthless prairie land, and that little colony are now living in comfort and comparative affluence."

Let us analyze this statement briefly, and so see the country as Dr. Depew sees it. The first fact mentioned is that the average intelligent American knows more about European countries than about his own. "Very few are familiar with the climatic, the agricultural or the commercial conditions and possibilities of the Gulf States." The eloquent doctor might have added, "or of any other section south of the Ohio and Potomac." Note, also, his reference to "the thousands of miles of arid plains" that lie between the eastern borders of California and Oregon and the Missouri valley, that can only be made habitable by vast public expenditures upon a general system of irrigation. Think of the meaning of his story of the Northwestern farmers who fled from their blizzard-swept lands to Texas, and there found comfort and sources of prosperity on the "almost worthless prairie land" they converted into ricefields. Was not Depew wise in his suggestion that "we need a department of government to teach congested populations where they can find air, health, wealth and liberty?"

The time may come fifty or a hundred years hence when the United States government will find it necessary to redeem, by scientific irrigation, those "thousands of miles of the great American desert" upon which "ten millions of people could live in prosperity and happiness," but no such expenditure will be needed or be justifiable while vast fertile areas of the South remain open to settlers. Nor can the national government be expected to establish a department to teach the "capital, labor and competition concentrated in crowded cities" where "congested populations can find air, health, wealth and liberty."

All these opportunities the South offers to the people who need them, and yet not more than one person in ten thousand

knows of them, notwithstanding all the efforts that have been made to call attention to them. What the South needs is an honest, earnest, persistent, never-ceasing systematic endeavor to presents its attractions and advantages to all that class to whom Dr. Depew referred. What the "Southern States" and the Manufacturers' Record have done, what the railroad companies traversing that territory, and what many cities and towns have attempted to do to attract attention to the South, could be increased a thousand-fold to the great benefit of every Southern commonwealth. The "Southern States" and the Manufacturers' Record are as ready as in the past to advance the South's interests, and by "precept upon precept and line upon line" to "teach congested populations where they can find air, health, wealth and liberty." If in this good work they can have the efficient co-operation of the railroads, the property-owners and, in fact, of the whole South, they can do a thousand-fold greater good to every State and every community than all they have thus far achieved.

### How It Can Be Done.

Many communities in the South profess to be anxious to secure immigration, but it all ends with professions. No vigorous efforts are made, and no money spent to accomplish this end, and, of course, no settlers are drawn that way. How to secure immigrants is a question that is being asked by many people; others are practically indifferent, not realizing the value to the community of the incoming of outside people. Mr. J. F. Merry, of the Illinois Central Railroad, presents in this issue, in a brief letter, a few practical facts, showing how energy and money combined brought good results, and how immigration has doubled the value of land. In a Mississippi county a few men determined to try to secure new settlers. They expended money for this purpose. In one year the result



shows the location of sixty-nine families, whose purchases of land aggregate 26,700 acres, and an increase in values throughout the county to an average of \$5 an acre, against \$3 one year ago. In the meantime, town property in that county has in some cases advanced 100 per cent. All this has been done in one year. Here is an example for every county in the South.

**One Acre in South Carolina Beats Fifty Acres in Illinois.**

Mr. C. R. Mower, of Rockford, Ill., in an article published recently in the Southern Farmer, of New Orleans, stated that corn lands in the river bottoms of Illinois are worth \$75 to \$125 an acre, "with a borrowing value of \$30 to \$50 an acre;" and then, to show the handsome profit made on the corn crop in that region, he gave the following estimate of cost, yield and receipts:

One man, six months, at \$30 per month .....	\$180 00
The team and machinery offsets the man's labor, consisting of three horses, sulky plow, drag or harrow, corn planter, horse hoe or wheeled cultivator, or siding cultivator (one machine), Studebaker wagon and double harness, expense for six months.....	180 00
Seed corn.....	8 00
Extra help gathering corn.....	20 00
Cribbing, shelling and elevator charges on an estimated yield of fifty bushels per acre, or 2500 bushels, at five cents (very liberal) .....	125 00
	<hr/>
	\$513 00
2500 bushels of corn, at thirty-five cents, being the average price for six years.....	875 00
Profit on fifty acres of corn.....	\$362 00

The above statement caught the attention of the News and Courier, of Charleston, S. C., which had been publishing reports of the most profitable crop of tobacco from one acre of ground, or the largest return from any crop produced from one acre of

ground in South Carolina in 1895. The News and Courier published the following statement of sale and expenses on one acre; also statement of turnip crop on same acre after the tobacco crop, from J. E. Brockinton, Kingstree, S. C:

"1750 pounds tobacco on one acre sold for.....	\$326 00
Expense .....	40 00
	<hr/>
	\$286 00
200 bushels turnips at 40...	80 00
Expenses .....	5 00
	<hr/>
	\$75 00
	<hr/>
Total .....	\$361 00

"I have the same acre now planted in Irish potatoes; after the potatoes will plant in tobacco, and after the tobacco again in turnips, and I hope to beat the above record.  
"J. E. B."

A profit of \$361 on one acre of ground, and the profit on fifty acres of corn in Illinois, \$362. With less yield than fifty bushels of corn to the acre, the News and Courier continues, the one South Carolina acre would have beaten the fifty Illinois acres, instead of falling \$1 behind them, but it is enough for the purposes of comparison that it equaled them in profitableness even when they are allowed so large a yield. And this is not all that is to be said in favor of the South Carolina acre.

Mr. Mower, it will be noted, rates the value of the Illinois land at an average of \$100 an acre, and makes no allowance in his calculation for "interest and taxes" on it. Fifty acres, worth \$50 an acre, represents an invested capital of \$5000, however, and the interest and taxes on that sum would absorb the whole "profit" from their crop, reckoning the "interest" at 7 per cent. and the taxes at only \$12. Mr. Brockinton's acre probably represents a capital of \$30, and the interest and taxes on that sum would not amount to \$2.50. Probably land of equal value for tobacco and turnip raising

could be bought in the same neighborhood for \$10 or \$15 an acre, or even less.

Several impressive morals can be drawn from this comparison of intensive farming and profitable cropping on Illinois river bottoms and South Carolina high lands respectively, but three will suffice for the present purpose.

One is that no young man in South Carolina, who is willing to work, need be at any loss about where to find wholesome and profitable work in South Carolina.

Another is that it would appear to be the part of wisdom for farmers in Illinois who are trying to make a living by raising 35-cent corn on \$100-an-acre corn lands in Illinois to pull up their stakes and try what they can do at farming on \$10-an-acre, or \$5-an-acre tobacco lands in South Carolina.

And another is that the land owners and farmers of Williamsburg county, who have lands to sell, and desire to sell them to industrious men who will settle on them and help to "develop" Williamsburg county, would do well for themselves by advertising their county and its capabilities to the Illinois farmers and the farmers of the West and Northwest generally, by making a first-class exhibit, of whatever they have to exhibit, in the approaching Cotton-States Exhibition to be held in Chicago.

The "Southern States" is indebted to the United States Agricultural Department for the cuts used in the article on "Arbor Day" in this issue.

### **The Outcry Against Railroads.**

A recent editorial in the Atlanta Journal on the Seaboard Air Line furnishes an opportunity to say a few pertinent words about not only the Seaboard Air Line, but railroads in general.

The Journal complains that the Seaboard has moved its general offices from Atlanta to Portsmouth, and, further, that the schedule of passenger trains is arranged

without regard for the convenience of people living along the line near Atlanta, or for the welfare of Atlanta merchants. As for the first grievance, the main offices of the company have always been at Portsmouth. It has never had any other headquarters. The offices of the general manager, the traffic manager and the general passenger agent are located there, and presumably such subordinate officers as were formerly stationed at Atlanta have been moved to Portsmouth, in order that they might be in immediate contact with and under the supervision of their chiefs. This would seem to be the most natural thing in the world, and to complain of it as not being "fair treatment" of Atlanta is childish.

Moreover, in regard to this and the other ground of complaint, the officers of the Seaboard Air Line are broad, liberal, progressive, able men, experienced and skillful in railroad management. They are doubtless fully alive to the fact that the interests of the road are bound up with the interests of the communities it serves. It is to their interest to make the road as profitable to its owners as possible, and it is absurd to imagine that they are going to unnecessarily put any barriers in the way of traffic, or to purposely pursue any policy hostile to the welfare of the territory from which the road gets its business.

So many newspaper writers and so large a part of the public lose sight of the fact that railroads, like newspapers and other business undertakings, are operated for the purpose of making money. They are not philanthropic institutions. It cannot be expected of them that they shall run their trains more frequently than the traffic they can secure will justify; that they shall sustain offices in localities where they are not needed, simply as a matter of good will, or that they shall pay out for public convenience and benefit more money than they receive for carrying passengers and freight.



Nor can a railroad regulate its train schedules with reference to the wants of a small part of its territory only. The interests of the people along the entire line must be equally considered.

It is a pity that this unreasoning propensity to decry railroads is so widely prevalent and so deeply rooted. The average man, if he happens to be going a distance of ten miles on any railroad, expects the entire system to be operated with reference to his convenience on that particular trip.

The idea that grasses cannot be grown in the South is so widespread and so strongly entrenched in the minds of Northern farmers that only by constant and continued demonstration of its fallacy can it be corrected. Supplementing what we have already published on this subject, we present this month the testimony of one of the highest authorities in the land, Prof. S. M. Tracey, director Mississippi Agricultural Experiment Station.



# IMMIGRATION NOTES.

## **The Bellamy Colony.**

The Bellamy Colony, or, as it is perhaps better known, the Magnolia Colony, located at Shepherd, San Jacinto county, Texas, is just entering its second year. It is a socialistic experiment, having for its object the practical demonstration of the idea outlined in Bellamy's reform novel, "Looking Backward." An extract from the first annual report of the colony, recently published, gives the following information:

"This colony was started in April, 1895, mainly by Texas people. A piece of timbered land, seventy-six acres, was bought, and several members, with families, were placed on it to test the soil, climate, health, cost of clearing the land, etc.

"The results were all that could have been wished for. The health of the colony has been excellent, the climate mild and pleasant and the seasons regular. The country is well adapted to farming, gardening, fruit raising, dairying, poultry, hogs, bee keeping, etc., and in most of these the colony is already engaged.

"The cost of clearing the land is considerable, but lightened somewhat by the sale of the wood and timber that is taken off."

The timber country was preferred for this colony as affording cheaper building and manufacturing material. The colonists say that a small saw and planing mill will be put in and a number of other industries, including a newspaper and publishing business; also the manufacture of wagons, buggies, implements, furniture, etc., will be started as quickly as competent people can be interested in those lines. None but earnest and thorough socialists are admitted. All land, property of every description, is owned in common, and the members share equally in the results of their labors.

It is intended that the colony, if successful, shall become part of a general co-operative system, which will produce, manufacture and exchange all the ordinary necessities, and, in time, the comforts and luxuries, of life, independent of the com-

petitive markets and money system. They say their exchanges will be effected through clearing houses at convenient centres.

No money, they say, will be used, except for freights, imports, taxes and purchase of lands for the extension of the system. They claim that only by co-operation and consolidation of interests can there be anything like a general equality of results or any improvement on present conditions.

They contend that the "anarchy of competition" is responsible for the poverty of the country, and that under collective ownership and administration a great part of the crime, ignorance, sickness, idleness, drunkenness and general misery would cease. That there would be better houses, better living, greater social and educational advantages and a broader field for genius and ability.

Magnolia Colony, they say, is not the only one engaged in the work. Others on the same line are operating in other States.

## **A Foreign Settlement in Georgia.**

Messrs. Missler & Krimmert, bankers, of New York, who have a large foreign correspondence and clientage, own 12,000 acres of land at Normandale, in Dodge county, Georgia, which, as previously reported in the "Southern States," they purchased from the Normandale Lumber Co., and about 8000 acres at a point four miles north of Milan. In the Normandale tract is included the town of Normandale (now to be called "Missler"), which was the business centre of the Normandale Lumber Co., and contains a depot, large store and 100 houses of one to four rooms each, averaging in cost about \$500. This town lies on both sides of the Southern Railway, which runs through it in a northwesternly direction, the greater part of the town being on the west side of the track. The cottages are painted white or whitewashed, and present an attractive appearance. The firm of Missler & Krimmert are maintaining at



Missler a general store and farm. The colonists have opened and planted, or have ready to plant, 1800 acres of land—1000 acres in the Normandale tract and 800 acres of the Milan tract; their plantings consist of corn, oats, potatoes, tomatoes, cabbages, egg-plants, spinach, cauliflower, beets, cucumbers, beans, celery, lettuce, etc.; also tobacco, peas, beans, and, in fact, everything that will grow in that country. They propose to ship their products direct to New York via the Ocean Steamship Co. and the Georgia & Alabama Railway. Messrs. Missler & Krimmert, being the agents of the North German Lloyds, are in a position to attract emigration from European points. Their agents throughout Europe are distributing information printed in three different languages, covering all phases of the attractions of their settlements. These agents are permitted to ticket colonists by proper order forms via North German Lloyd steamships through New York via Ocean Steamship Co. to Savannah and the line of the Georgia & Alabama Railway. Messrs. Missler & Krimmert hold their lands at \$5 per acre, payable \$1 cash, balance in five years. None of the town property is for sale, and none will be sold until the farm land is all sold and settled. All working details of the colony are handled directly by Missler & Krimmert, as they have no local agents. About 150 people are now reported settled on the lands, and an average of fifty per month are expected as a regular movement. Col. A. Pope, of the Georgia & Alabama road, believes that the plans of Messrs. Missler & Krimmert contain the basis of a satisfactory immigration of a suitable class of foreigners—Swedes, Germans, Scandinavians and other people from the North of Europe.

### English Settlers for Florida.

Through the efforts of Mr. George Mitchell, an Englishman, seconded by influential friends in England, a syndicate has, it is reported, been formed to colonize lands in Florida. It is said that the charter has been secured and all necessary preliminaries completed. Its capital is claimed to be \$3,000,000. It will acquire and clear wild lands. The timber will be manufactured into whatever articles it may be best suited for. As the lands are cleared, they will be laid out in plots and drained or irri-

gated as their condition may indicate. They will then be thrown open for settlement. "Throughout Great Britain," Mr. Mitchell said, "are scattered thousands of men and women who have lived for years in India, Ceylon, Africa or other of England's warmer possessions. They do not desire to spend all their lives in foreign lands, yet find the raw climate of England too trying. The United States comes next in the home feeling to an Englishman, and the Florida climate is the one these people need. This is the special class we propose to look out for. But we are just as ready to locate the same intelligent class from any part of the United States, France, Germany, anywhere."

About thirty Italians and Hungarians arrived at Brunswick, Ga., on April 20, on the Mallory steamer from New York, en route to Normandale, Ga., where they will form part of a colony soon to settle in that section.

About the middle of April, Mr. W. F. Barrows, a member of the Indiana Farmer Co., went down to Washington county, Florida, with some other interested parties, and with the assistance of A. G. Chandlee, their local agent, made selections for twenty-two families on 2000 acres of the land recently secured by the company. Judging from present prospects, it is thought the company will have 200 families colonized in the next twelve months.

It is reported that a syndicate of New York men has negotiated for a tract of 25,000 acres of land in the vicinity of Helena, on the Georgia & Alabama Railway, upon which they propose to locate several hundred families of Swedes. The tract will be subdivided into small farms, and trucking and fruit growing will be the chief pursuits of the colonists.

Speaking on the subject of immigration to Tennessee recently, Col. J. B. Killebrew, of Chattanooga, said: "The immigration agent will not have anything to do with the sale of lands, and puts himself on the side of the immigrant to protect him and save him from imposition. And when I feel I have to engage in speculation on lands and receive commissions to sustain myself, I

will resign my position. I do not think any man, who places himself in the responsible position of immigration agent, should for a moment think of making a profit on the immigrant. A great many lands on every division of the Nashville, Chattanooga & St. Louis road have been secured by persons who propose to sell them to immigrants. They put very reasonable prices on them, and we see to it that they do not advance the prices with the tide of immigrants. Should they do so, we will not recommend them to immigrants. We have a perfect check on them in this way. We want a desirable class of immigrants, and we have a variety of soil, adapted to fruit culture, the cereals, grasses, tobacco, etc., at very low prices."

Captain Eric Von Axelson, the well-known Swedish immigration agent, has been appointed general land agent of the Yellow River Railroad, which runs from Crestview, a station on the Louisville & Nashville Railroad, to Florala, Ala. The lands of this company are in West Florida. The timber has been cut off, and the land is simply waiting for the plow. The general manager of the road, W. B. Wright, of Pensacola, is an enterprising man, and will do all that is possible to build up the country along his road. Captain Von Axelson has established his headquarters at Laurel Hill, Fla., and is now at work getting up a Swedish co-operative colony.

Messrs. E. T. Griffith and V. Benbow, of Muncie, Ind., have taken an option on 500 acres of land with the Tifton Land & Emigration Co.

Mr. Paul Scherer, immigration agent of the Norfolk & Western road, is said to have sold two farms recently in Bedford county, Virginia, to five Swiss gentlemen. One of the farms, 265 acres, was purchased by F. Lenenberer and two others; the other farm, 120 acres, by A. Steiner and W. Jordi. One of the gentlemen named is said to have attended one of the best agricultural colleges in Switzerland for three years.

The Francis E. Willard Co-Operative Colony has just begun operations, it is said, at Andrews, N. C. It is located in the heart of Valley river valley, which is in the

extreme southwestern corner of North Carolina. The railroad from Asheville to Murphy passes through the 20,000 acres of land purchased by the Willardites. The first instalment of the colony, headed by President W. C. Damon and Secretary E. P. Smith, arrived in Andrews last October, and since then the population has steadily increased. The colonists have adopted a novel and interesting set of by-laws to govern their enterprise. They say that they do not wish to boom land, or to build a town; that they are moved by a deep conviction that society throughout the United States generally is constructed on a wrong basis, and they propose to begin all over again in their new locality and to gradually bring the entire people around to their way of thinking. It is reported that before the war more than a million and a half of gold was taken out of the valley where the Willardites are located, and expert gold miners say that with improved machinery more than that amount can be taken from the mines formerly worked.

The Ohio Colonization Co., of Dayton, Ohio, proposes to settle a colony of 1000 Ohio families in Lauderdale county, Alabama. Mr. Isaac S. Bradley, president of the company, and Dr. Samuel F. George, general manager, have bought for the company from Mr. Frank Perry, of Florence, Ala., 4600 acres of land in the Reserve, extending from and including the Key farm to Woodland, and between the Cheatham's Ferry road on the north and the Tennessee river on the south, fronting three miles on the river. The conditions of the purchase are that the purchasers shall pay the sum of \$5000, with the balance on credit. The deal was closed verbally on the 11th of April, the contract to be submitted to the board of directors at Dayton, of which Dr. George and Judge Bradley are members, and upon their approval, the documents to be signed, sealed and delivered. The association will, within six weeks or so, commence the erection of houses and the making of improvements, and will locate their members. The general scheme is a new thing in this part of the country, and is practical co-operation and community of labor and goods, based on agriculture first and then manufactures. The full development of the scheme would, it is said, mean an in-



flux of 4000 or 5000 people to Lauderdale in the near future. The two representatives of the association, Dr. George and Judge Bradley, are highly sanguine of success, and their standing at their home in Dayton is represented as being above reproach. Mr. Thurston H. Allen, of the Allen-Van Buskirk Immigration Co., was instrumental in causing these gentlemen to choose Lauderdale.

The Camp Fire, a G. A. R. paper lately published in Nebraska, has located at Grand Ridge, West Florida, on the line of the Louisville & Nashville Railroad. Judge Porter and Capt. J. F. Zediker, the owners of the paper, have control of a fine body of land, on which they will settle immigrants, the colony to be known as the Porter Colony. They are working diligently, and expect to locate in their section next fall many soldiers whose declining years may be rendered happy by the salubrious climate.

Mr. William Windt, a German from Milwaukee, purchased about a month ago 6000 acres in Escambia county, Alabama, on which he intends to settle thrifty German immigrants, who will raise early garden truck to be shipped to Northern markets, and also engage in fruit growing.

A delegation of Germans from Kansas City Kan., representing several hundred of their countrymen—some now in Kansas and others across the Atlantic—have recently visited Atlanta and the surrounding country, looking for lands upon which to settle. They want 5000 acres of land, it is said, suitable for diversified farming, within a distance of an easy day's journey to the city of Atlanta, which will be the market for their varied products. It is the intention of the colonists to establish a society of their own. Those who visited the section are scientific truck growers.

Messrs. Fred. P. Chaubuckle, of Okemaw, Mich.; Charles Magnusen, of Woodboro, Wis., and James H. Pope, of Quincy, Ill., have visited the Sunny South Colony at Chadbourne, N. C., prospecting for lands there or in the colony, which the Columbus County Land Co. is organizing. They

were followed by seventeen other Western people.

At Waycross, Ga., it is said, in the latter part of March, Mr. Herbert Murphy's Clough-Hilliard land was opened to the colonization of good Northern and Western farmers. The land was surveyed and laid off in ten-acre tracts, and a map of the survey completed. Thousands of maps and circulars will be distributed judiciously among the better class of farmers in the North and West, showing the location of the property and its desirability. The property consists of rich yellow-pine timber and rich agricultural land. It borders on the northern limits of the city, and extends beyond Kettle Creek, about four miles from Waycross. The soil will produce a fine quality of tobacco and all the products that are prominent in the agriculture of South Georgia. Waycross has a fine system of artesian water works.

At Shell Beach, about two miles north of Sarasota, Capt. C. N. Thompson, of Chicago, purchased last fall a tract of land embracing a mile and one-half bay frontage; broad avenues were cleared, and the tract has been laid off in lots with 100 feet frontage on the bay and 200 feet depth. The work of erecting residences has begun, and so far three very neat, comfortable houses have been completed. The property-holders, it is said, intend to lay concrete walks to connect all of the houses, as has already been done in the above cases. Work was commenced early in April on a club house intended to accommodate ten families, who have already donated sufficient for the erection of a handsome building, Captain Thompson having donated the site. He will continue to build a number of cottages on his personal account, claiming that he has a number of them rented in advance for next season. A substantial wharf has been built, bathhouses will be arranged, and every detail in connection with the colony bears the stamp of practical business and substantial appointments. An effort will be made to have a steamer plying between Sarasota and Bradenton by next season, so that quick connections can be made with the steamer Manatee for Tampa.

# GENERAL NOTES.

## **The Scandinavian in America.**

The third paper of the series of race characteristics in American life is contributed to the May Atlantic Monthly by Charles Kendrick Babcock. Of the Scandinavian he says: "The great adaptability of the Scandinavians to the circumstances and customs of their adopted country is acknowledged on all sides. Whenever and wherever they have transplanted themselves, whether in England in the ninth century, in Normandy in the tenth, in Sicily in the eleventh, or in America in the nineteenth, the same process of transformation has taken place. No other people in history has such a record. In the United States they have eagerly learned English, and have quickly done so because of its similarity to their own languages in structure and vocabulary. Of course, men who have come hither as adults always prefer the old speech, and in some districts of the country and in Scandinavian quarters of the cities, it will be heard almost exclusively, because of the large numbers of the foreign born. But the second generation quite invariably choose English, and many of them have forgotten the language of their fathers."

## **Citrus Fruit Culture.**

Planters who have had experience in the Biscayne Bay country of Florida believe that the orange, the lime and the lemon, and perhaps most largely the grape fruit, will flourish there. Orange trees that were planted at Biscayne, the northernmost postoffice on the bay, twenty-five years ago, are still to be seen, hale and thrifty, and in season laden with excellent fruit. The trees are planted less than an eighth of a mile from the bay front, and all these years have had no attention. With this example before them, homesteaders and buyers of land in this vicinity have not hesitated to put out hundreds of young trees, which are reported in a most thrifty condition. Some growers remove the Coralline rock, giving

the tree the benefit of a location in the under soil, but others have planted in the thin soil that overlies the rock, believing that the sturdy roots of the young tree will penetrate the porous, phosphate-charged, moisture-conserving rock, that in the minds of some is an impediment to successful planting.

## **Cranberry Culture in North Carolina.**

Capt. C. W. Chase, a prominent Massachusetts cranberry grower, in the latter part of April closed a contract for 800 acres of land on the banks of the Pasquotank river, about three miles from Elizabeth City, N. C. On this land there is a fine natural growth of cranberries. "The season here is six months earlier than it is in Massachusetts," said Captain Chase; "land is much cheaper, and labor does not cost nearly so much. I am the first man to begin cranberry culture in this State, but I think it will soon develop into a large and profitable industry. As to the profit in the crop, the cost of cultivation is comparatively little, and I have often gathered \$850 worth of cranberries from a single acre."

The land that will be planted in cranberries is only three miles from Edenton, on the banks of the Pasquotank, and has transportation facilities by land and water. All along the Alligator river, in Hyde county, cranberries grow wild, it is said. This is one more industry for North Carolina, for which there seems to be a great future, another proof of the recent assertion of the editor of the Philadelphia Times that "every part of North Carolina has some one thing that will make it a distinctively great section."

## **The Georgia Watermelon Crop.**

The Georgia watermelon growers, as if by unanimous agreement, this year determined to decrease their acreage, and it is learned that the crop is 40 per cent. less this year than last. The acreage in cantaloupes is considerably increased this year,



as results from past shipments have been more satisfactory than with watermelons.

### **A New England Man's Views of the South.**

Mr. J. D. Swain, of Nashua, N. H., a retired manufacturer of forty years' experience, stated in a recent interview in Nashville, Tenn., that he believed the whole South was destined to great prosperity. In this interview, he said:

"The iron manufacturers made an effort five or six years ago to get into the South. They established plants in Alabama and Georgia. They found an excellent quality of ore and coal, and were enabled to produce pig iron at much less cost than in the North; but the scheme was premature. There were no railroad facilities for transporting the iron after making it. Then the financial troubles had their effect. When there are a sufficient number of railroads in operation, he said, this section will find ample capital anxious to come here for iron manufacturing. Then the South will supply not only this country, but the world. We simply cannot compete with the South; freights would eat us up.

"All the leading cotton manufacturers are seeking legislative action authorizing an increase in their capital stock, with the privilege of locating anywhere. Two large corporations at Nashua have increased their capital stock, bought large tracts of coal lands in Alabama, and will erect plants there this season. The claim is made that they will manufacture only the coarser grades of goods in the South, and still manufacture the finer grades North, but this is a subterfuge, and the South will eventually get all the great Eastern cotton manufactories. This is their natural location—where they have the coal, the water power and cotton growing at their door, with no transportation charges, except on manufactured goods.

"If the South builds railroads, she will be as near the seacoast as New England, and the railroads will be as good property as the factories in a few years. Some cotton factories here pay 15, 25 and even 30 per cent., while in New England today they are probably running behind. None are making anything. The New York warehouses are packed full of goods, for which there

is no market, and which they cannot afford to hold.

"Capital is turning towards the South, and there are millions of dollars ready and anxious for opportunity. The West is dead. We invested much money in the West and lost it. In the South it is different. Investments are safe and profitable. This generation will not see confidence restored in Western investments. The only thing that has been in the way of extensive Southern investments was the feeling lingering since the war. This is dying out, and good fellowship restored."

### **Will Be A Big Pear Crop.**

Mr. T. Remsen Crawford, press agent of the Plant System, recently made a trip to Thomasville, Albany and neighboring points in the fruit section to secure information for the system relative to the fruit crop outlook.

"The pear crop, as I find from those most prominently interested in the orchards," Mr. Crawford said, "has reached a point where it can be predicted with some certainty what it will be. The pears are now about the size of large marbles, and the trees are loaded down with them. There is a little blight in all the orchards, but it doesn't scatter much, and is not doing any great amount of damage.

"I am told by Mr. B. W. Stone, of Thomasville, secretary of the Pear Growers' Association for Georgia and Florida, and there is no one more reliably posted on the subject, that the crop this year will be somewhere between 15,000 and 18,000 barrels. This, he says, is what might be called a healthfully large crop of pears, the fruit is in elegant condition and promises to be better, according to old pear growers, than it was last year.

"Last year's crop was phenomenally large, reaching nearly 25,000 barrels. This, they all say, was too large a crop, and coming on late along with the peach crop, the pears sold at low prices. They say the crop is fully a week earlier this year, and a week means a great deal to the fruit and vegetable grower. Besides this, the size of the crop is such as will not glut the market, and it is believed they will bring far better prices than they have in some years."

With regard to the peach crop in that



section, around Albany, Tifton and other points in Southwest Georgia, Mr. Crawford said about the same statements might be made.

### **Meeting of Fruit Growers.**

A movement is under way to organize the fruit growers throughout the country. The Georgia and other horticulturists have become interested in the idea, and a circular sent out to fruit growers' unions bears the signature of John D. Cunningham, president of the Georgia association, among other names. The following are extracts from the circular:

"The immense quantity of fruit shipped from the South to the North, from the Pacific to the Atlantic, from the centre to the coast, give to the transportation companies a great volume of business. The transportation lines find it necessary to have their associations adjust rates and avoid needless competition. The fruit growers of the United States, in a like association of the whole, will be enabled to better existing conditions in transportation matters and to mutually assist each section in correcting unjust discriminations on the part of common carriers. In behalf of the many fruit unions throughout the country, and for the better success of the fruit-marketing associations and the protection of the fruit growers, a meeting of representatives of the fruit growers' unions and associations of the United States is to be held at the Palmer House, Chicago, Ill., on Wednesday, May 20, 1896, for the purpose of organizing the National Fruit Growers' Union."

### **The News and Courier's Prize Farming Contest.**

To supplement the prize of \$100, which was offered in January last by the Charleston News and Courier for the best record of "all round farming" made in South Carolina this year, the Rock Hill Buggy Co., of Charleston, has offered one of the finest open buggies made by the company, the regular retail price being \$85. The two prizes together will insure to the winner in the contest the very handsome reward of \$185 for his labor over and above the profits of his year's work. The contest will close on December 31, 1896, and all reports of operations for the year must be made before

January 15, 1897. Each report must present on the one hand a statement of the total cost of conducting the farm, including every item fairly chargeable to the expense account; and, on the other hand, a like itemized statement of moneys received from sales, and of the local or other market value of articles remaining unsold. Both statements must be sworn to by the contestants and attested by three reputable and disinterested men, his neighbors, after examination of his records, to be submitted for their inspection and approval. The largest net profit made per acre will be calculated from these reports, and the prize will be awarded accordingly. No farm of less than ten acres will be admitted to the contest, and each contestant is required to cultivate not less than four different kinds of field or orchard, or field and orchard crops.

### **Celery and Lettuce in the South.**

It is reported that an old marsh, in Florida, between Tampa and East Tampa, will be converted into a celery farm. The farm will comprise forty acres, protected from overflows by a four-foot dike. The farm will be in charge of a German gardener. Last year's experiments with celery at Tifton, Ga., and Tampa, Fla., demonstrated, it is said, that such a crop successfully cultivated in this section, brings a handsome return to the grower. In Tampa last year \$1000 was no unusual return from an acre of celery, and one family in Tampa realized \$2000 on an acre. Much attention is given to the cultivation of lettuce also. The lesson taught by the freeze of 1895 caused many farmers to cover their lettuce crop. Surprising results have been obtained by nearly every farmer who planted this crop to any considerable extent. The acreage this year has been four times as large as that of any previous year, but the enormous yield seems to have had no effect upon the market prices. Lettuce is a crop that requires a cultivated market, and good prices were obtained for it in New York and Philadelphia after some work on the part of commission merchants. The first crop was planted last September, and the first shipments were made about the latter part of December or the 1st of January. They were light at first, but they gradually increased, till they reached about 3000 bas-



kets per week from Tampa. About 300 baskets is the average yield per acre. It is said to cost about 30 cents a basket to grow lettuce and load it upon the cars for market; the cost of transportation to New York, seventy-one cents, makes the expense of placing the crop upon the market \$1.01 per crate. The average sale of lettuce this year is estimated at \$3.76 per crate, making the net profit to the growers \$2.75.

### Testimony of Northern Settlers.

The following statements are from Northern persons who have settled at Statham, Ga., on the Seaboard Air Line:

Col. O. S. Hayes, who is at the head of the Ohio Colony of ex-Union soldiers at Statham, is a nephew of Col. Wm. L. Strong, mayor of New York. Col. Hayes says: "I think this is the greatest place in the world for people suffering bronchial, catarrhal and pulmonary troubles. I have gained forty pounds since coming here."

Mr. O. Dyanman moved South with his family from Defiance, Ohio. He says: "I have been here eleven months, and I am delighted with the country, and my family are all well pleased. I would not go back North for the whole North, if compelled to stay there. I will say to my Northern friends, that if they can sell their property in the North for half price, they can come here and better their condition. We have the finest all-the-year-around climate to be found anywhere. We commence eating the choicest home-raised fruits in May, and continue until November. The water is as fine as any in the world. I have spent fifty-five summers of my life, and spent the finest summer of my life here in the South. As for winter, we have had none, comparatively speaking. When you land here, you will be shown the country by the old citizens, who are very anxious for Northern people to locate and build homes among them."

Rev. James W. Wright, who came from Rocky river, Ohio, says: "I am well pleased with this section, and am glad that I came. My health has greatly improved, and I have found living cheaper than in the North."

Mr. W. A. Lord came from Orange, Mass. He says: "I came to Statham two months ago, and am very much pleased with the country. The soils and climate seem to be well adapted to the growing of

nearly all sorts of fruits and agricultural products grown in similar latitude. Land can be bought at reasonable prices and on fair terms.

"Grasses are not grown to a great extent in this locality, but I am satisfied that with proper care and by the selection of proper varieties, grasses and clover can be successfully grown. Cotton has been the chief crop for many years, and has been grown to the exclusion of other products, but the people are beginning to see the folly of such exclusive cropping, and are fast turning their attention to a more varied system of agriculture.

"To sum up the whole thing in a nutshell, the climate and country are all right and the near future will certainly see a great change for the better in this whole Southern country, and Northeast Georgia will keep up fully with the procession."

Mr. J. M. Woods says: "I have been troubled with catarrh for several years, and moved from Franklin Grove, Ill., and came South to find relief. Since living here, I have been benefited. I don't take any medicine, and am so much better that I believe I will be entirely cured. I have bought a farm, and am fixing it for a fruit farm. This is a fine country and good climate."

The fame of the Ellentown Hammock, in Florida, is remarkable. Forty-six years ago it was picked out of the whole State of Florida as the richest land and best adapted for the foundation of a great sugar plantation, although in the centre of a State which was then almost a wilderness. In 1858, this property was sold for \$190,000. It had been cleared and planted in sugar cane in the year the war opened, but the cane was never harvested, and the land has returned to the original forest. Now, after thirty years, its value is again recognized, and there will be located here one of the largest groves in the State, Mr. Kimball C. Atwood, a wealthy gentleman of New York city, having purchased a tract of 160 acres of this section—150 acres from the Patten estate and ten acres from Mr. C. P. Parrish.

In the early part of April, fifty colonists arrived at Glenmore, on the Alabama Midland Line of the Plant System, about ten miles west of Waycross. These are for the

Elwood Park Colony, of which Mr. G. W. Shults is organizer and superintendent. The colonists are from Ohio.

Mr. J. L. Reed, of Marion county, Georgia, has purchased forty acres of land near Ocean Springs, Miss., on the north side of the Louisville & Nashville Railroad, where he expects to plant a fruit and vegetable farm and raise fine stock.

## CORRESPONDENCE.

### A New Hampshire Man's Opinion of Arkansas.

*Editor Southern States:*

I was reared on a farm among the bleak granite hills of New Hampshire, where the most careful, thorough and laborious cultivation and the utilization of every possible means of fertilization (including the saving of dish-water, weeds and garbage for compost heaps) are necessary to obtain fair returns from planting. I went from farm life into other lines of business, which took me into many Western and Northwestern States, the Territories and foreign lands. A year ago, while at Kansas City, Mo., I one day accidentally strolled into the office of a railroad company that operates lines southward from Kansas City, and found exhibited what was to me an amazing display of the products of Southwest Missouri and North and Western Arkansas, comprising fruits of nearly every variety, grains, vegetables, grasses and various specimens of timbers, ores, etc. As I proceeded to investigate farther, I became more and more interested, and returning to St. Paul, Minn., mentally resolved to later on see for myself this, to me, fabled land. I entered into correspondence with individuals at different points, and the reports I received so closely tallied with each other, and sustained my first information, that in November last, accompanied by a few acquaintances who had become interested, I came down to "spy out the land." A physician friend, solicitous for my health, fitted me out with a liberal supply of quinine, liver pills, fever powders, sleeping tablets, etc. Another friend supplied me with ammonia and a generous flask of fine old whiskey for snake, centipede, tarantula bites, etc. Still another supplied me with a fan and a mosquito bar, and suggested,

also, a stock of dynamite for defensive purposes. Leaving Minnesota during a hard snow-storm, and passing through Iowa in a cold rain and drizzle, we found at Sulphur Springs, Ark., our first stopping place, a bright, clear, balmy afternoon, and spent some time looking over the country in Benton and adjoining counties. We were all most favorably impressed with the change from the monotonous prairies to these cozy valleys and beautiful timbered hills, the mellow atmosphere, the clear, bright sparkling streams, pure, cold spring waters and the welcome sunshine. It was remarked that if this is so charmingly delightful and entrancingly beautiful at this dreary season of the year, what can it be in leafy May and June. The large yields of corn, oats and mammoth grasses surprised us, for in all our experience we had never seen such productions. We noted many large orchards of varied fruits, in many cases, however, showing general neglect in proper attention, but were informed the yield was quite satisfactory, and the natural thought was, what would be the additional returns did these orchards, etc., receive the care we had been accustomed to see bestowed on them. We found a general condition of peace and contentment existing, the people kindly and hospitably disposed, law-abiding, lawyers and doctors scarce, preachers a plenty and to spare. After several months' sojourn, I have not had any occasion, as yet, to open my medicine chest; on the contrary, I have been greatly relieved from a severe case of catarrh, and have increased in flesh. The ammonia is untouched, and is liable to remain so; the whiskey came in well, in a country where local option exists and is rigidly enforced. I am informed there are absolutely no mosquitoes. The fan will be returned to the donor, as Minnesota summers, while shorter, are much warmer than these here. My ramblings have been intensely interesting and instructive to me. I find the country a positive and direct contradiction to the impression I had had regarding it; in short, a revelation in its people, their modes, manners and customs; the healthful and desirable climate; the wonderful productiveness of the soil under, in many cases, inferior cultivation. Arkansas in general, and particularly this northwestern section, is receiving a steady flow of



a good class of immigration. Improvements are visible on every side in the agricultural line. The raw material in abundance is at hand, as a basis, for many and diversified manufacturing ventures, and are gradually being utilized. Two of my three companions have located here permanently—one in business, and the other will go into fruit farming; while the writer has written his people North that he is content to live, die and be buried here. W. L. HALL.

Benton County, Arkansas.

### How It Can Be Done.

*Editor Southern States:*

The question of how the great agricultural sections of the South may be developed is being solved in a practical way at many points on the lines of the Illinois Central and Yazoo & Mississippi Valley railroads in the States of Kentucky, Tennessee, Mississippi and Louisiana. The passenger department of the "Central" has for fifteen years persistently advertised, through the press and otherwise, the climate, the character of the soil and the products to which it is especially adapted, and has been rewarded in seeing a steady immigration from the Northwest, which has, in some localities of the South, completely changed the farm methods and the character of the crops raised. For instance, Crystal Springs, Miss., has almost wholly abandoned the growing of cotton, and the farmers in that vicinity are, many of them, cultivating acres of tomatoes and other vegetables for the early Northern markets. It seems incredible, and yet it is a fact, that the shipments of tomatoes alone from this point reach into the thousands of carloads in a single season.

But the point I desire to especially emphasize in this short article is the fact that no one can so successfully advertise and develop a given locality as the people who live there, and are naturally, of all others, most interested in the character of the immigration and the habits and customs of the families who are to become their permanent neighbors. As an illustration of this, allow me to refer to an instance which occurred on the line of the Illinois Central only last year, and with which I am personally familiar. The citizens of a certain excellent agricultural county in Mississippi, which had not to exceed 20 per cent. of its

lands under cultivation, had been indifferent as to inviting immigration, and, as a result, only a few Northern families had located in that county. A few enterprising men residing at the county seat, who were familiar with what was being done at other points through the introduction of Northern energy and Northern capital, called a public meeting, I think in March, 1895. The question of immigration was fully discussed, and then and there money was raised for the compilation of a pamphlet describing accurately and in detail the advantages of the town and county. Within sixty days the pamphlet was published, and two good men, supplied with this kind of literature, visited the Northwestern States and distributed the same among the farmers and others, whom they found glad to receive them. Last month, one year from the date of the meeting to which I have referred, another meeting was called in the same town and in the same hall. This consisted of bankers, lawyers, doctors and others from the city, and farmers, several of whom, less than a year ago were located in Illinois, Iowa, Minnesota, Wisconsin, South Dakota or Nebraska, who are now freeholders in that very county. The object of this meeting was to report as to the practical workings of the plan adopted the year before, and the reports showed that within a year sixty-nine families had located within the county, and their aggregate purchases amounted to 26,700 acres. In a single year lands in this county have advanced from \$3 to \$5 per acre, and city property, in some cases, fully 100 per cent.

I would not say that such phenomenal results could always be obtained, but I am confident if each community throughout the South would make special efforts to advertise their own advantages, and not depend entirely upon railroads and real estate agents, they would unquestionably get quicker and more satisfactory results.

J. F. MERRY,

Asst. Gen. Pass. Agt., I. C. R. R.

### BOOKS AND MAGAZINES.

The Southern Baptist Pulpit. Edited by Rev. J. F. Love. Philadelphia, American Baptist Publication Society. Price \$2.

The fiftieth anniversary of the organiza-

tion of the Southern Baptist Convention was celebrated at the annual meeting of the convention held in Washington, D. C., in May, 1895. As a sort of memorial of this "jubilee session," Rev. J. F. Love has published this book, containing a notable sermon from each of thirty-three conspicuous Baptist preachers of the South, each sermon being accompanied by a photograph of the author of it and a sketch of his life. It is a book that every Baptist in the South will want and ought to have. The personal sketches are alone worth the price of it.

Washington; or, The Revolution. An Historical Drama. By Ethan Allen. In two parts. Published by F. Tennyson Neely, Chicago and New York. Each part, paper, fifty cents; cloth, \$1.50.

Mr. Allen, of the New York bar, has found time to step aside from professional duties to dramatize the story of the struggle for American independence. The first part, from the Boston Massacre to the surrender of General Burgoyne, is in less than 40,000 words; and part second, from Red Bank and Valley Forge to the inauguration of George Washington as the first President of the United States, about 55,000. The whole story of the Revolution can be gathered to the memory in a day. Every figure in the work is chiselled distinctly; the style is clear and forcible; the narrative full of romance, pathos and noble incident. The student who may have heretofore found history a wearisome task will seize eagerly upon this form of it, and find that, while enjoying the pleasure of reading, important dates and events become firmly fixed in his memory.

Plant Breeding. By L. H. Bailey. Uniform with the Horticulturists' Rule Book. New York, Macmillan & Co. \$1.

Professor Bailey, in this little volume, has brought together the subject-matter of various lectures which he has been in the habit of delivering before the students of Cornell University. The heart of the book is in the third lecture, where specific rules for the guidance of the cultivator are laid down. The influence of soils and methods of treatment, effects of climate, the change of seed, etc., are discussed; the use and need of crossing in the vegetable kingdom, and its value as a means of originating new va-

rieties; directions for the crossing of plants are given in detail, with full illustrations, and translations of important foreign opinions on plant breeding. Plant Breeding is the second volume in the "Garden Craft" series, the first number in which, "The Horticulturists' Rule Book," was reviewed in a former number of the "Southern States."

The Spraying of Plants. By E. G. Lodeman, instructor in Horticulture in the Cornell University. New York, Macmillan & Co. \$1.

Mr. Lodeman has expended the effort of two years upon this book, having visited Europe for the purpose of collecting material, making a trip to the vineyards of the Medoc, in which the modern practice of spraying had its origin. The contents are: Part I. "The History and Principles of the Spraying of Plants," comprising the following chapters: I. "Early History of Spraying;" II. "Spraying in Foreign Countries;" III. "Spraying in America;" IV. "Materials and Formulas Used in Spraying;" V. "Spraying Devices and Machinery;" VI. "Action of Insecticides and Fungicides." Part II. "Specific Directions for the Spraying of Cultivated Plants." The book is thoroughly illustrated with new and original engravings.

This is published as one of the volumes in Messrs. Macmillan & Co.'s "Rural Science Series." Other volumes in preparation are: "The Apple in North America," by L. H. Bailey, editor of the series; "The Fertility of the Land," by I. P. Roberts, of Cornell University; "Milk and its Products," by H. H. Wing, of Cornell University; "Bush Fruits," by Fred W. Card, University of Nebraska. It is expected that the series will finally cover the entire field of rural life. Some of the topics for early treatment are: "Forestry," "Grape Culture," "Planting Manual," "The Grass," "Plant Life," "Rural Economics," "Landscape Gardening," etc.

Southern Sidelights. A Picture of Social and Economic Life in the South a Generation Before the War. By Edward Ingle, A. B. New York, Thomas Y. Crowell & Co. \$1.75.

This compact volume of information is an important addition to the study of Am-



erican history and life. Mr. Ingle has conscientiously gathered from contemporary magazine and newspaper articles, from public documents, from private letters, every available testimony in regard to the particular state of society or politics portrayed in this work. After defining what he means by the term "Southern," Mr. Ingle takes up in turn the following topics: I. "Traits of the People;" II. "Where Cotton Was Ruler;" III. "Phases of Industry;" IV. "Trade and Commerce;" V. "The Educational Situation;" VI. "Literary Aspirations;" VII. "Plans for Progress;" VIII. "The Peculiar Institution;" IX. "The Crisis."

Carefully selected statistics are given to show that the outline history is a truthful one, while the grace of the author's style and the harmonious blending of politic happenings and economic conditions with the natural sentiments, the habits of thought, the mode of action of the people, prevents the rather poetical title of the volume from being considered a misnomer.

New Orleans: The Place and the People.

By Grace King. New York, Macmillan & Co., publishers. \$2.50.

In the introduction to this work, the author asks: "Which is the better guarantee of truth—the eye or the heart? Is either trustworthy when directed by love? Does not the birthplace, like the mother, or with the mother, implicate both eye and heart into partiality, even from birth?"

Miss King is deeply in love with her subject, yet one feels in reading the book that she endeavored conscientiously to present a truthful picture. The work is historical, yet so romantic is the history of New Orleans, "the entrancing city of the heart," that it has all the charm of the most fascinating work of fiction. The contents are: "History of the Mississippi River;" "Colonization of Louisiana;" "Founding of New Orleans;" "The Ursuline Sisters;" "Indian Troubles;" "Cession to Spain;" "Spanish Domination;" "Spanish Administration;" "American Domination;" "The Baratarians;" "The Glorious Eighth of January;" "Ante-Bellum New Orleans;" "War;" "Convent of the Holy Family," concluding with the death and burial of Charles Gayarre, the historian of Louisiana, to whose memory and name Miss King pays loving

and grateful tribute. The book is profusely illustrated.

The Commercial Travelers' Home Magazine, of Binghamton, N. Y., has shortened its name to the Home Magazine, and its May number presents a handsome new cover, designed by Claude Fayette Bragdon. The change has been in contemplation for some time, but an unfounded rumor that a magazine with a similar name, formerly edited by Mrs. John A. Logan, was to be revived at Washington, caused the delay. There is only one Home Magazine, therefore, and it is published at Binghamton.

The Lincoln paper in the May McClure's contains some very interesting unpublished letters and anecdotes, showing Lincoln's rare tact and sagacity as a political manager, even as a young man. It also describes Lincoln's life in Washington as a member of Congress in 1847-1849, and reproduces from the newspaper in which it was reported at the time an important but now unknown speech of Lincoln's made in New England in 1848. A number of rare pictures appear with the paper.

The McDowell Fashion Magazines of the month furnish abundant illustrations of new fancies in summer millinery. "La Mode de Paris" and "Paris Album of Fashions" cost \$3.50 per year's subscription, or thirty-five cents a copy. The "French Dressmaker" is \$3 per annum, or thirty cents a copy, and "La Mode" \$1.50 a year, or fifteen cents a copy. If you are unable to procure either of these journals from your newsdealer, apply by mail to Messrs. A. McDowell & Co., 4 West Fourteenth street, New York.

An attractively seasonable flavor pervades the Ladies' Home Journal for May, the rich bounties of spring being presented in poetry, in prose and in picture. Among the articles along more serious lines is Ex-President Harrison's paper on "This Country of Ours," in which he discusses most lucidly the President's participation in treaty-making and his exercise of the veto. Also, Dr. Parkhurst's paper on, "Shall We Send Our Boy to College?" a question he discusses forcibly, pro and con,

and presents a conclusive solution to a problem that confronts so many parents. The May Journal, both in a literary and pictorial way, is an admirable magazine. By the Curtis Publishing Co., Philadelphia. \$1 per year; ten cents per copy.

There is always an endless surprise of good things to be found in Littell's Living Age, and recent numbers have been no exception to the rule. We note in particular "Recent Science," by Prince Kropotkin, the eminent Russian scientist and revolutionist, which consists of two papers, "Roentgen's Rays" and "The Erect Ape-Man." The same issue contains an article by Eivind Astrup, "In the Land of the Northernmost Eskimo," and another, "The Chevalier D'Eon as a Book Collector," by W. Roberts. Notable papers in other late issues are "South Africa and the Chartered Company," by Charles Harrison; "In Praise of the Boers," by H. A. Bryden; "National Biography," by Leslie Stephen; "The Baltic Canal and How It Came to be Made," by W. H. Wheeler; "Spenser, and England as He Viewed It," by Geo. Serrell; "Cardinal Manning and the Catholic Revival," by A. M. Fairbairn; "Personal Reminiscences of Cardinal Manning," by Aubrey de Vere; "The Rival Leaders of the Czechs," by Edith Sellers, etc. The above partial list gives but a trifling idea of the great field covered by the Living Age. Published weekly, each issue brings just such valuable scientific, biographical and historical essays, sketches and reviews, to say nothing of the choice fiction and poetry, which are equally features of this admirable periodical. The price, formerly \$8 a year, is now but \$6. Published weekly by Littell & Co., Boston.

The May "Book News" is as bright as a spring morning. The detached frontispiece is a portrait of Miss Anne Hollingsworth Wharton, author of "Through Colonial Doorways," "Colonial Days and Dames," etc. Dr. Talcott Williams talks helpfully of new books, and able letters from New York, Boston, Chicago and London put one in touch with the book world. Some 260 new books are noticed—among them "Democracy and Liberty," by William Edward Hartpole Lecky. Many pic-

tures from the new books brighten the pages of this unique magazine. Monthly; fifty cents a year. John Wanamaker, publisher, Philadelphia.

Harper's Weekly for May 2 contains an article on the "Squadron Drill" of the vessels of the United States Navy at Hampton Roads, illustrated by a double-page and a front-page drawing by Carlton T. Chapman. There is also a preliminary article on the General Conference of the Methodist Episcopal Church, with a page of portraits of the most important bishops, officers and delegates; and an especially timely paper devoted to the development of the garden-truck industry in the South.

The Review of Reviews for May is an exceedingly alert and well-planned number, true from beginning to end to the well-known methods and ideals of this unique periodical. The department of Leading Articles of the Month, which the original features of the Review of Reviews have sometimes seemed to be crowding just a little, is allowed in the May number to have its full space. In the compass of about forty pages one finds a remarkably thorough and varied digest of the most significant articles in the newest issues of the principal American, English and Continental periodicals. The Review goes to press after the other monthly periodicals are all printed, and in view of its timeliness requiring very rapid mechanical execution, its typography and pictures are remarkably handsome. The most important original feature in this number is entitled "The Great Occasions of 1896." In a rapid narrative fashion, with due regard to dates and precise facts, the reader is apprised of all the great gatherings and conventions of a political, religious or educational character, foreign expositions and noteworthy events in general that the coming six months will afford to American and European travelers.

Some of the features in Harper's Weekly for May 9 are: "The Exposition at Budapesth," with a double-page illustration and an article by Robert Howard Russell; "The Tennessee Exposition," illustrated; "The Insurrection in Cuba," illustrated, and "Garden Trucking," by L. J. Vance, illus-



trated. The last-mentioned article treats of the increasing industry of raising vegetables and fruits in the South for sale in the Northern and Western markets during the winter season.

Harper's Bazar for May 2 is brightened by a variety of very beautiful toilettes suitable to the spring. Fans, parasols and other dainty accessories of the costume of a thoroughly well-dressed woman are described among this season's novelties, and there is also a look at those indispensable requisites, gloves, shoes and stockings. "The Out-door Woman" is occupied with the latest news about tennis and golf. The home-coming to Blenheim of the young Duke and Duchess of Marlborough are described with picture and pen, and Mrs. Burton Harrison's charming novelette, giving an episode in the life of a more humble but not less entertaining "Young Couple," begins in this notable May number of the Bazar.

The May number of Harper's Magazine opens with an article on "Mark Twain," by his long-time friend, Rev. Joseph H. Twichell. The paper abounds in anecdote, and is embellished with a frontispiece portrait, engraved by Florian from the latest photograph of Mr. Clemens, and with pictures of his Hartford and Elmira homes by Childe Hassam. The attitude of England during the Civil War in America is strikingly set forth in two letters written in 1862 and 1863 by William E. Gladstone to the late Cyrus W. Field. The development of Washington during his early manhood is the subject of a paper by Professor Woodrow Wilson, called "At Home in Virginia." Poultney Bigelow on "The Struggle for Liberty" treats of the battle of Leipsic and the resulting retreat of Napoleon from Germany. Brander Matthews contributes a paper entitled "The Penalty of Humor." The number is strong in fiction. Mr. Warner's suggestive comment maintains the high character of the Editor's Study, and the Editor's Drawer is introduced with a farce, "First Aid to the Injured," by W. G. Van Tassel Sutphen.

Scribner's for June will contain an interesting article from the pen of Henry Nor-

man, the correspondent of the London Chronicle, entitled "In the Balkans—the Chessboard of Europe." It is a most vivid presentation of the curious principalities that make up that interesting corner of the world—Roumania, Montenegro, Servia, Bosnia, etc. Also, a second instalment of "Vailima Table-Talk;" a unique story, entitled "His College Life, by President William De Witt Hyde, of Bowdoin College; "A Letter to Town," by H. C. Bunner; the usual instalment of Barne's "Sentimental Tommy;" the second article on "The Trotting Horse," by Hamilton Busbey, and an exciting account of hunting the Big Horn in the Rockies, by Harry C. Hale, a lieutenant in the United States army, under the title, "At St. Mary's."

## NEWSPAPER COMMENT.

### To the Southland.

There is a great deal of commotion at present in the Northwest, due to the migration from that section of the Union to the Southern States. The movement is the outgrowth of the settlement in Louisiana some years ago of some colonies and individuals, who found the change most agreeable and profitable. The news of their fortune and prosperity has induced others to follow their example, so that now many States are losing in population by reason of this migratory spirit.

It is evident that this movement has caused more or less alarm in some sections, so that now efforts are being made to head it off. The States principally affected are Kansas, Nebraska, Wisconsin, Iowa and South Dakota, although the movement southward is not confined to these States alone, but it is serious enough there to cause alarm. The Chicago Times-Herald recently entered into an investigation of the matter, and its correspondents sent to that paper various communications from different States, showing the extent of the migratory movements and setting forth the arguments used to encourage and discourage it. The Times-Herald declared that there were no politics in the movement, though a large number of the emigrants are Republicans. The argument used against the movement is that these Republicans will be in constant friction with the Southern peo-

ple in political affairs, it being alleged that the climate and the negro are simply bugaboos.

It has been learned that the railroads are the promoters of the movement, and that the political argument is not material with men who are willing to try to raise corn on land worth from \$40 to \$100 per acre, when they believe that they can buy land equally as good in the South at from \$5 to \$15 per acre. Then, too, they find they can work nearly the whole year in the South, and that the climate is better for the general health.

Several years ago a colony of Northern G. A. R. men, with their families, was established in Georgia, and it is said that it has been very prosperous since. Several other colonies besides those mentioned have departed for the South. One consisted of Norwegian farmers from Iowa. It is also understood that J. R. Sovereign, the K. of L. leader, is to head a party of emigrants bound for Arkansas, where a tract of land already has been purchased for their settlement. A party of Populists, under the leadership of a Des Moines man, recently took up a residence in the southern part of Alabama. This latter is a co-operative society, and though it is not probable that the system will be successful, still the emigrants will be well calculated to become a permanent part of the population of the State to which they are going.

The causes of this movement of Western farmers toward the South are evident. The first inducement is the cheapness of land. So much land is being sold now in the West that is arid and unproductive, and settlers find it almost impossible to raise enough to pay for it. Then, too, the prices for farm products have been so low during the past three or four years that the small revenue derived from farming has been most discouraging. The failure of crops in some sections and the severity of the climate also are given as causes for the migration to the South.

The people evidently are turning to the one section where lands are cheap and where the climate is balmy the year round. Whether railroads or individuals are believed, the movement matters not. Emigrants believe that there are greater inducements for them in the South than in the West. The migratory trend to the South-

ward, therefore, is not surprising. As to politics, that feature will take care of itself. No one need be discouraged by reason of political considerations. The men who go South will vote for their interests, as they see the light, just as they have done in the section from which they emigrate.

It cannot be disputed that the South has the facilities and resources for making it the great Mecca of emigration for the next quarter or half century. Great things may be expected of Dixie, even in the next decade.—Albany Evening Journal.

### Farming in the South.

The "Southern States," one of the best magazines published in this country, in its April number contains a very interesting article relative to the agricultural development of the South. The writer explains why so few white people of the laboring class came to the South prior to the war, which was on account of a disinclination to come in contact with slave labor. After the close of the war these same people emigrated to the West, believing that if they located in this section they would be placed on a social level with the freed negroes. Farmers who have come here from the Northwest, and who have prospered in the South, will testify to the fact that this is a mistake. The article in the "Southern States" magazine was written by Dr. J. B. Killebrew, and the facts presented in it are taken from the census of 1890. He shows that more successful results have been experienced from the operation of small farms in the South than from those in any other portion of the country. He draws a comparison between the advantages that accrue to farmers in the Northern States and to those in the Southern States. In other words, the experience of the farmers in Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North and South Dakota, Nebraska and Kansas, North Central States, is contrasted with that of the farmers of Arkansas, Kentucky, Tennessee, Alabama, Mississippi, Louisiana and Texas, the South Central States. The value of land, fences and buildings belonging to the 1,923,822 farms of the North Central States was, in 1890, \$7,069,767,154. The returned value of the farm products for the preceding year in these States was \$1,112,949,820, or 15.7 per cent. of the value of



farms and improvements. When the South Central States are considered, it is seen that the value of the land, fences and buildings on the 1,080,772 farms embraced in this group of States during the year 1890 was \$1,440,022,598, while the value of the farm products in 1889 was \$480,337,764, which is  $33\frac{1}{3}$  per cent. of the total valuation of the farms and improvements. "The plain and most obvious conclusions drawn from these figures, says the New Orleans Picayune, in its review of this excellent article, "is that the same amount of capital invested in farms and farm improvements in the South Central States will yield more than twice the percentage on the investment that it would if invested in the North Central States. Nor is this all. A very large proportion of the crops grown on the farms of the North Central States must be consumed in providing for the exigencies of long winters. Stock must be cared for and fed six months, as against an average of three months in the South Central States.

"Dr. Killebrew finds a still more powerful argument in favor of the South Central States. Fuel for winter does not cost half as much, nor are there any blizzards to battle with in the winter, or dreadful si-moons in the summer to destroy the product of farm labor. The enjoyments of life are more than doubled by the amenity of the climate and the fruitfulness of the country in the South Central States.

"The debt situation furnishes some important comparisons. Without pretending here to search out the causes of the indebtedness, but merely to state the facts as they are shown by the census, it will be enough to cite that in 1890 there were 1,376,666 mortgages on the 1,923,822 farms in the North Central States, carrying a mortgage indebtedness of \$1,194,352,052. This shows 70 per cent. of the farms mortgaged. In the South Central States, at the same time, there were 207,510 mortgages on the 1,080,772 farms, involving a mortgage indebtedness of \$184,729,981, thus showing only about one-fifth of the farms in the South Central States mortgaged, as against 70 per cent. of the farms in the North Central States.

"This is an extremely favorable condition for the Southern people, particularly when it is remembered that they lost \$5,000,000,-

000 of property by the civil war. Under the circumstances, it would naturally be expected that the Southern farms would be mortgaged for every cent they will bear, but such is not the case. On the contrary, their condition is very favorable to an early escape from the worst burdens of debt, and this is not the least of the circumstances which invites the agricultural development of the South and immigration from the Northern farming States."—Little Rock Gazette.

## MISCELLANEOUS.

Messrs. W. W. Duson & Bro., Crowley, La., who advertise elsewhere in this issue, offer to supply full information about Southwest Louisiana by sending to inquirers maps and a copy of their new book, "Come and See," which is a well written pamphlet, handsomely printed and illustrated. The writer of this book demonstrates that Louisiana compares favorably with any country on the globe in health, the fertility of its soil and every other thing necessary for human comfort and progress. The pamphlet treats largely of the rice industry of Acadia Parish, which is celebrated everywhere, but the other advantages of Louisiana are set forth and statistics given to prove the writer's assertions—the cultivation of sugar cane, fruit, truck, stock, timber and the like. Messrs. Duson & Bro. are making sales almost daily to farmers from the North and West. Crowley is a thriving town, offering fine opportunities to the merchant, the manufacturer, the banker and the professional man. Messrs. Duson & Bro. claim that ten thousand Northern and Western people have located at Crowley. Home seekers should read the firm's advertisement and write for information.

At Fort Valley, in the center of the famous peach belt of Georgia, Mr. W. P. Blasingame offers bargains in fruit, farm, pasture and timber lands. A large number of Eastern and Western people have settled in this locality and are well satisfied with their success, besides enjoying perfect health and the comfort of a delightful climate. Prospective home-seekers should write to Mr. Blasingame for information, as he requests in an advertisement elsewhere in this issue.

Greensboro, N. C., has become a city of great importance, being a railroad center and good market, and having large hotels, churches, a female college, an industrial school, water works, gas and electric lighting, etc. Farmers in the vicinity of that city are especially well favored. Mr. R. G. Thomas advertises in this magazine a good farm of 265 acres within two and a-half miles of Greensboro.

## SOUNDS LIKE MIRACLES.

We will send free on application a large sheet of Unsolicited Testimonials about the cures made by Humphreys' Specifics. Address Humphreys' Medicine Co., New York.

# THE SOUTHERN STATES.

JUNE, 1896.

## SOME ATTRACTIONS OF THE SOUTH.

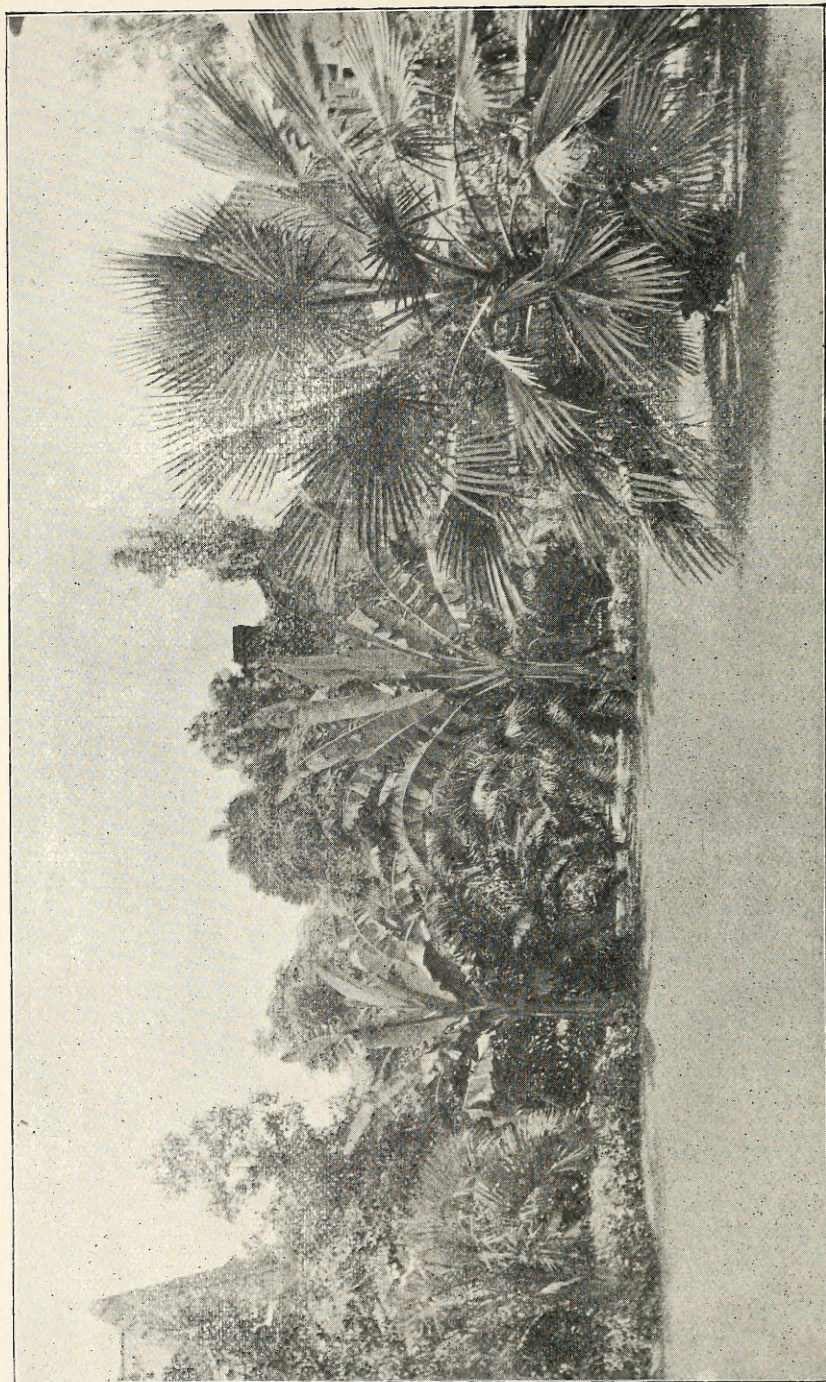
*By James R. Randall.*

It seems to be a fact, though a strange one, that many thousands of persons in this country, as well as abroad, regard the South as a flat, uninteresting region, wholly devoid of any natural beauties which characterize many other portions of the world. This sentiment, emphatically false and misleading, has been propagated and maintained despite the correction of Northern tourists and multitudinous publications in newspapers, magazines and other descriptive articles, more or less faithfully and profusely illustrated from photographs or artistic sketches taken on the spot. Nothing, however, is more difficult to eradicate than ignorant or traditional prejudice. It is fixed in the mind like the saw-palmetto in the earth, which, growing but a few feet above ground, has a root that is, picturesquely or pungently, said to reach out to China on the other side of the globe. As Americans are omnivorous readers, and as the South has for many years, especially in the two last decades, had persistent literary advertising, I must take for granted that much of this fallacy perpetuates itself in a species of morbid incredulity that almost defies reason and common sense. It is best, perhaps, when such stolid Ephraims are joined to their idols, that they be let alone; but, unquestionably, there are numerous persons who are innocently duped, and, therefore, excellent subjects for missionary work such as the "South-

ern States" magazine is now so usefully, powerfully and prosperously undertaking.

In a former article in the "Southern States" magazine, I wrote of the Skyland of the South, chiefly treating of that region which is most commonly known at Asheville and within a radius of about 100 miles circumjacent thereto. In that article an attempt was made to produce a panoramic effect of the South's alpine section, more as a sample of the highland there than a detailed account of the vast area of mountain and plain, sublime as Switzerland and yet unspeakably more charming, because the great peaks of the South are clad with verdure or til- lage to their very crowns, while the uplifted lands of Europe are bare and bald in comparison. It is not my intention to repeat what I then wrote, but to glance at this grand development of the Great Architect. It should suffice any rational person to know that a man like Mr. George Vanderbilt, who has prodigious wealth and wide knowledge of the world, would not select a mountain section of the South to build a more than royal palace, with its imperial domain, unless he had determined that nowhere on this terrestrial ball could he find any place more enchanting. And it is indeed an almost matchless prospect, with giant heights, lovely vales, at the meeting of two noble, pellucid rivers, where the atmosphere comes with health-laden wings, and purest drink-





A REPRESENTATIVE LAWN OF THE GULF STATES.

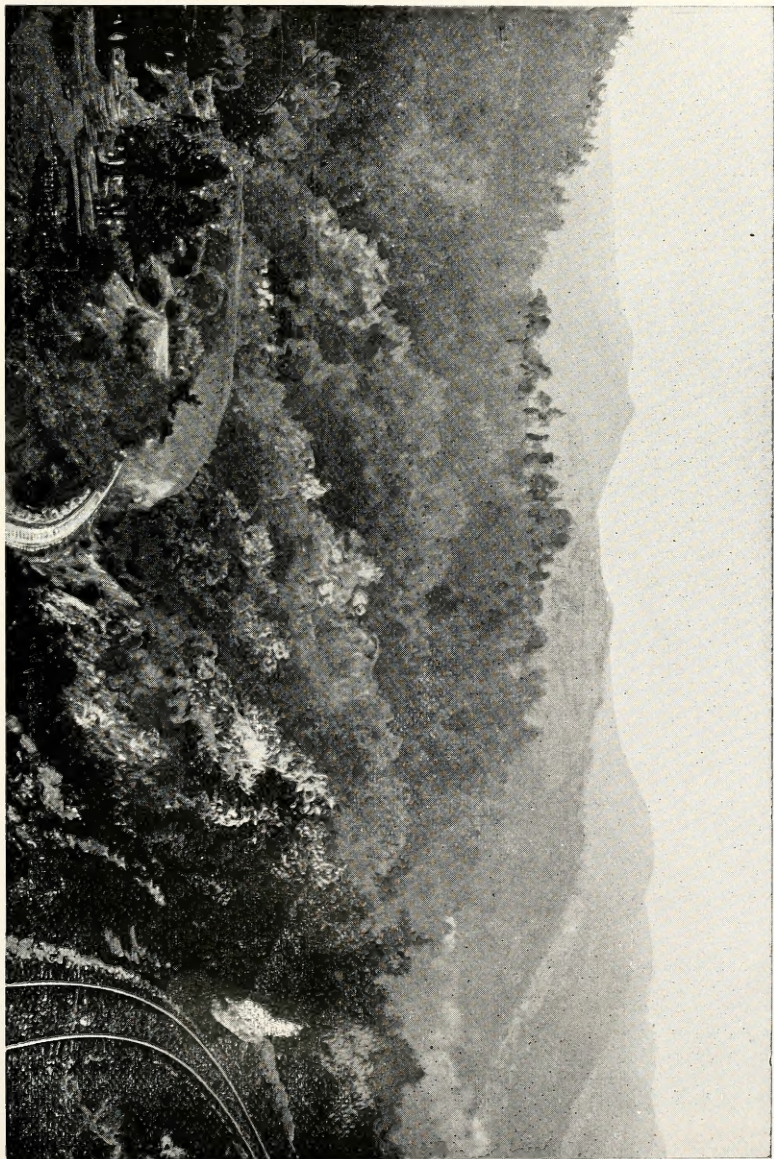


ing water is unsealed from the magical sanitariums of the hill-bosom hard by.

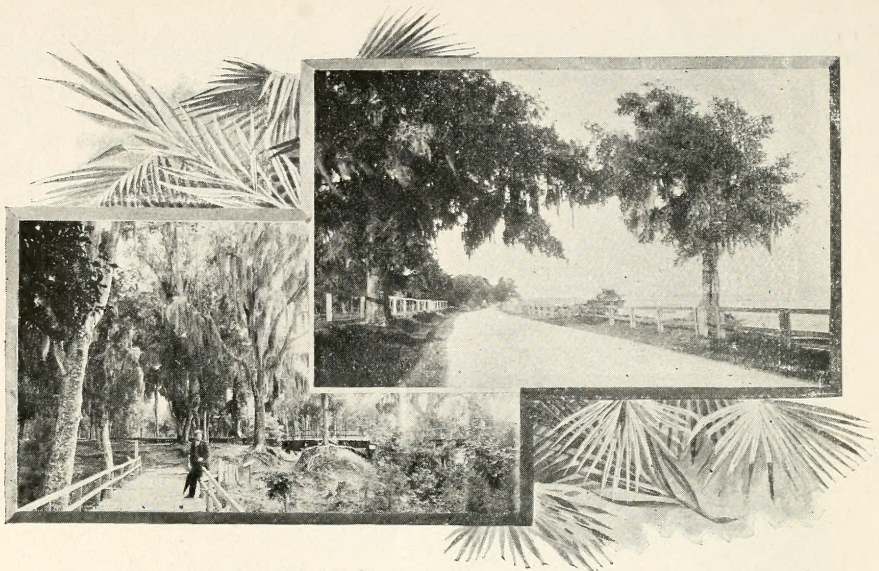
I might rest the case here and feel that even the most stubborn skeptic would be convinced, but it may be added that equally majestic and alluring lands are found, in prodigal profusion, in other parts of North Carolina, in South Carolina, Alabama, Georgia, the Virginias, Tennessee, Kentucky and, in degree, also Arkan-

sas. A Maryland man, naturally and with proper pride, boasts of the western portion of his State, and all who visit Pen Mar, Oakland and Deer Park, for example, recognize the glory of the vision; but I venture to say that the South more than equals that scenery, and I am bound to declare that the view from Lookout mountain, with the serpentine Tennessee river at its base, is much finer and

ASCENT OF THE BLUE RIDGE.







ON THE BAY SHORE, MOBILE, ALA.

more varied than any spectacle in Maryland. If there is a more splendid region than Southwestern Virginia I have yet to see it. In our far North-western empire there are loftier peaks and wilder chasms, but no such country as the South, with its immeasurable natural advantages for all wants of civilized man. If there is anything essentially amiss there I am not conversant with it, unless it be, for some reason or other, men who inhabit such places have not always or adequately realized the treasures they possess. In degree, the same may be declared of the whole mountain section of the South, which, along with the Piedmont country, will eventually become the predominant section of this mighty republic. Certain political, financial and racial conditions have retarded instant, invincible exploitation; but all difficulties will have final surmounting, and the South, as Keats personified Poetry, is

"Might ha'f slumber'ng on its own right arm"

It would be tedious, perhaps, and quite superfluous to point out the stupendous magnificence of other alpine parts of Georgia, Alabama, Tennessee, the Carolinas, the Virginias and Kentucky. Let me simply invite my in-

credulous Northern or European brethren to visit these sections and see for themselves that most extravagant pen-picturing is poor and weak when contrasted with palpable objects.

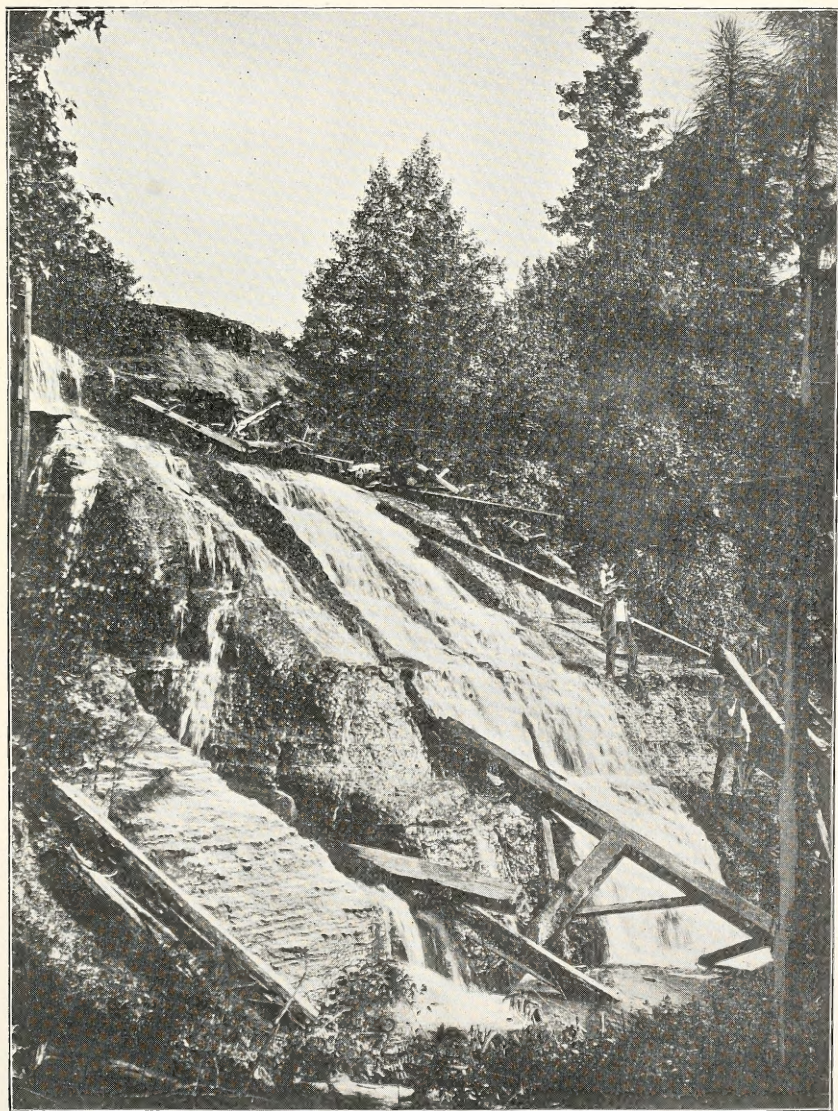
The hill country of the South is equally attractive and, in some respects, according to individual preference, more desirable for settlement than the mountain region. The Eastern or Western man would find in such places lands as fertile as any he left at home, with productions similar to his own and a climate far more genial. In this region, as in the mountain land, nature has been bountiful with healing fountains, and no Southern man need leave his own section to cure any complaints that thermal or medicinal waters hygienically reach. The Hot Springs of Arkansas are celebrated far and wide, but there are other waters equally potential in the same direction. Near Spartanburg, S. C., adjacent to the battlefield of Cowpens, where Tarleton was overthrown by the generalship of Morgan, Howard, Pickens and William Washington, there is a spring famous, from Revolutionary times and Indian tradition, which works veritable wonders for nearly every disease that affects our poor humanity, and is besides a nat-



ural Keeley cure, with none of the preliminary tortures of the doctor's formula. The country roundabout is rolling, fecund, delightful, with great hardwood trees and superb tillage, where clover grows spontaneously, as if to invite the Northerner to come there and abide, promising him all of earth's products that he is accustomed to and not a few other crops and fruits and flowers that he cannot coax at

home outside of an expensive conservatory. It would require many pages to recite the natural advantages of such portions of the South. They must, as the proverb goes, be seen to be appreciated.

There are indeed flat or prairie sections of the South, immense in area and boundless in fertility, as well as pleasing to the most artistic eye. All who read this magazine know what

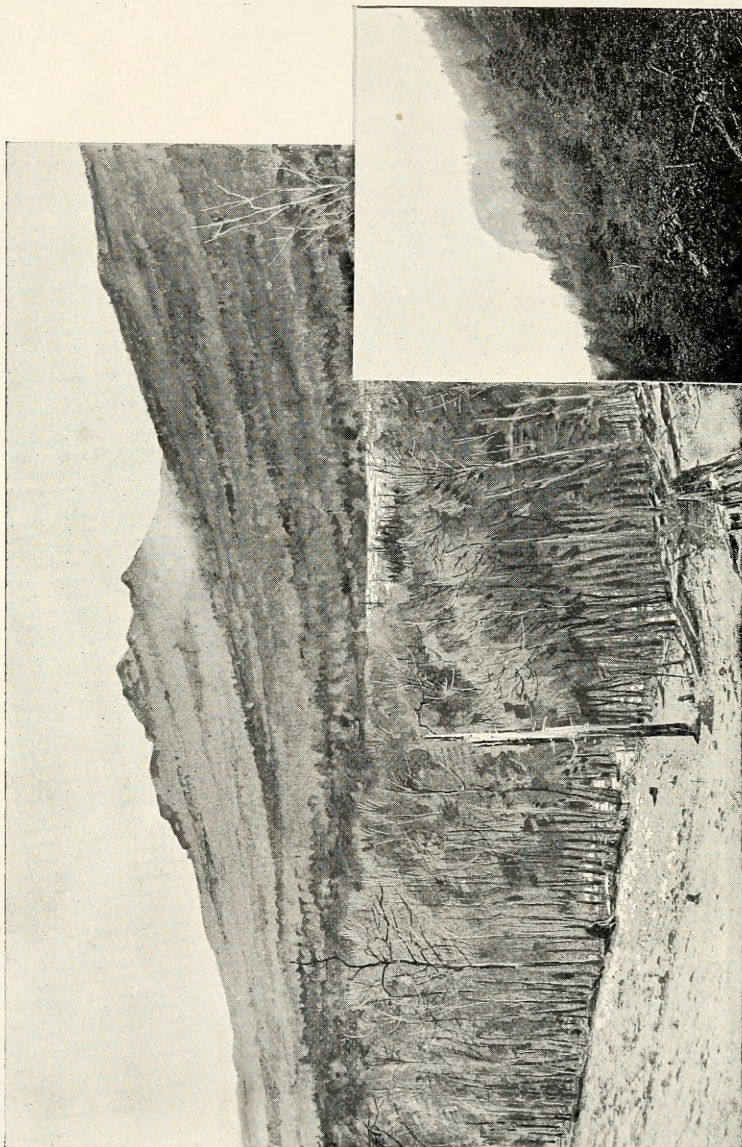


WATERFALL (NINETY-SIX FEET) NEAR ENTERPRISE, MISS.



marvels have been accomplished in such portions of Florida, Louisiana, South Carolina, Georgia and other level lands by Northern as well as Southern men. Need I even allude to

and that poetic domain of the Têche, not far by rail from New Orleans, which astounds the traveler with its vegetable and marine opulence, while ravishing his spirit with pictures of



THE PROFILE.

GRANDFATHER MOUNTAIN. ALTITUDE, 6000 FEET.

the rice region of Louisiana, the coast truck farms of Georgia and South Carolina, the peach country of the same commonwealths, the sugar-cane plantations of Louisiana and Florida,

land and water, such as beguiled the famous Joseph Jefferson, who is at once painter and actor of high art.

If you desire seaside diversion, there are innumerable places on the





SUB-TROPICAL FLORA, EASTERN NORTH CAROLINA.

Atlantic and Gulf coasts of the South where the beach is hard as you could wish for driving, where the billows are as bold as one could desire for bathing, and, in some places, in the semi-tropic zone, where a daily plunge in old ocean, along the Oriental Indian river, can be had in winter as well as summer. Why speak of Virginia Beach, near Norfolk; of Morehead City, in North Carolina; of Sullivan's Island, near Charleston, with Fort

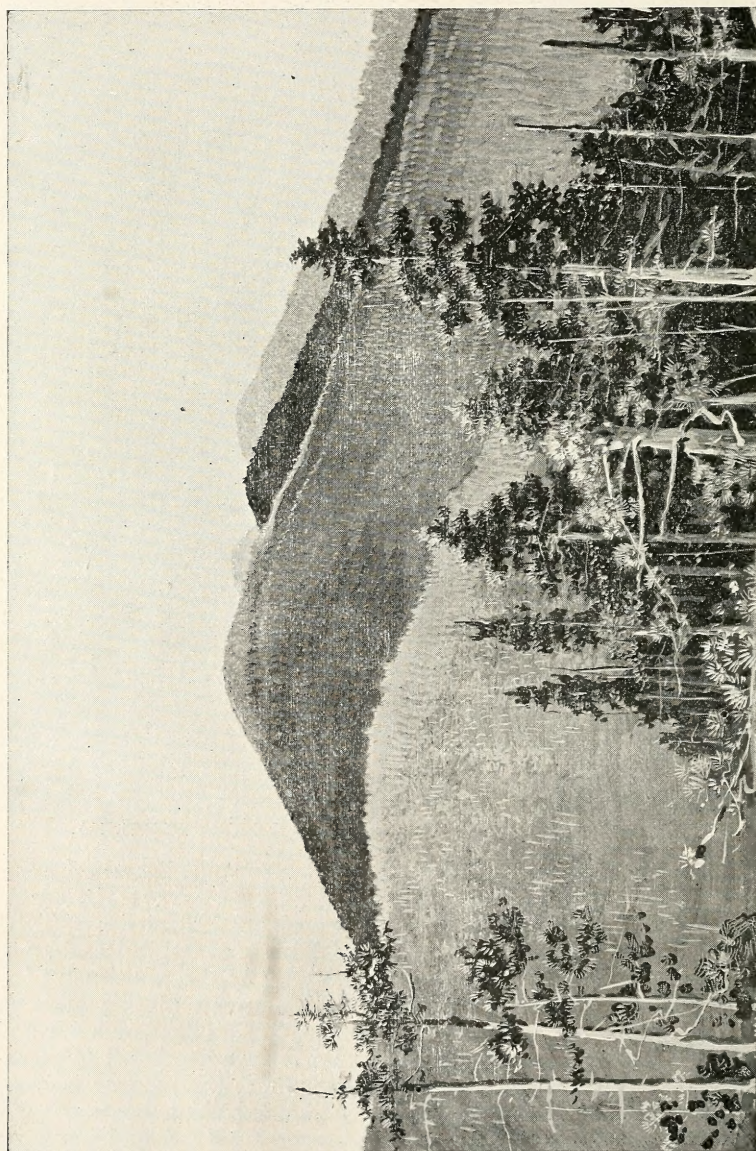
Sumter's ruined battlements in full view, and the grave of Osceola at the gate of Fort Moultrie; of Tybee, near Savannah; of Pablo Beach, near Jacksonville; of the multitude of Gulf resorts between Mobile and New Orleans, dotting the Louisville and Nashville Railway? At all of these delectable places the scenery is inebriating, fishing excellent, boating superb, the company refined and intelligent.

If we had not a deeper, more serious



and tremendous element in our lives, compelling us to labor, to sacrifice, to conquer our animal natures, to atone, perchance, for delinquencies, in order to reach meritoriously the endless life beyond, the only land of real happiness, how inspirationally a man might pass his days in such regions! As it is, with all of our moral responsibilities alive to conscientious duty, there is

more genuine, honest, sincere opportunity for such content and pleasure as the world affords at the South than in any other country, unless, indeed, the settler there be afflicted with acute or chronic nostalgia and incapable of remedial deliverance. Luckily, perhaps, the larger number of human beings may be said to either have freedom from this disease



THE BLACK BROTHERS FROM MOUNT MITCHELL. ALTITUDE OF MOUNT MITCHELL, 6717 FEET.



or at any rate, led by interest or self-protection, and then by acquired ties, shake it off actually, if not sentimentally.

That grand discontent which, under

men, like Quitman or Prentiss, or many other distinguished and even historical characters, become more Southern than Southerners.

There is, however, a natural, inex-



CULLASAJA FALLS, MACON COUNTY, NORTH CAROLINA.

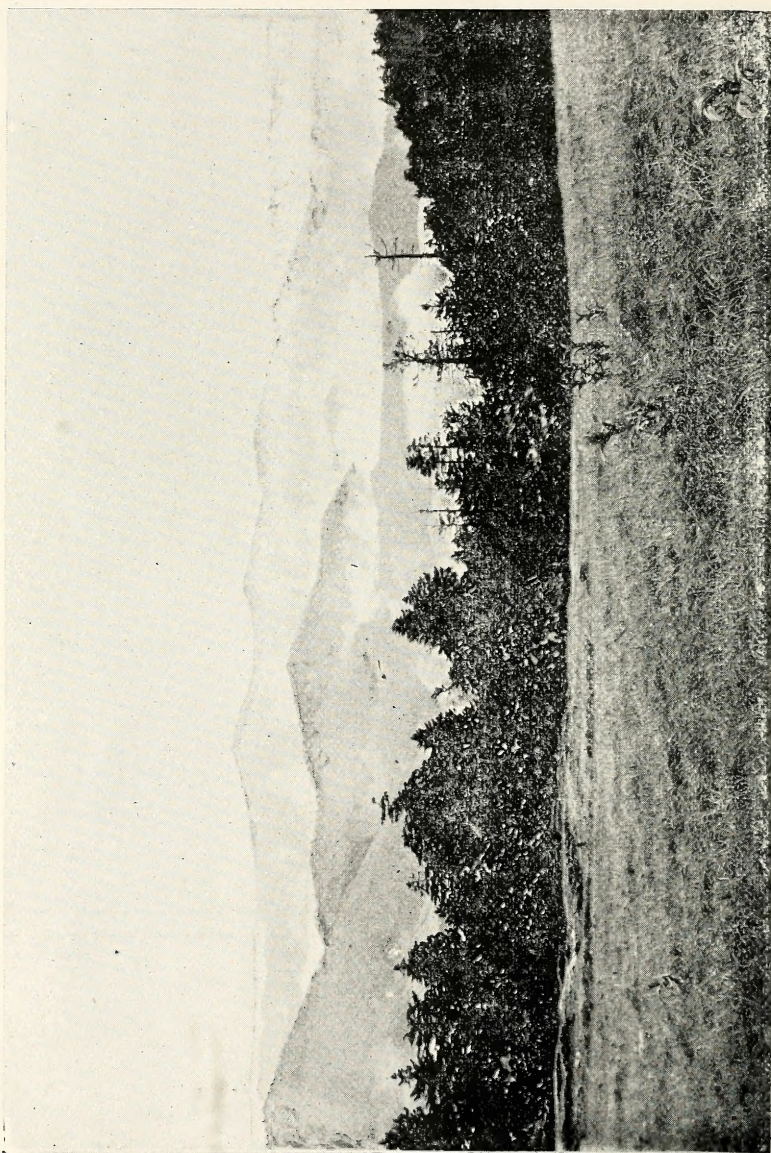
Providence, drove Columbus, as well as Stanley, forth on voyages of discovery, measurably actuates millions of our fellow-creatures, and so it comes to pass that often Northern

plicable and subtle law that compels redundant Northern population to move Southward. Now and then, it is curbed, thwarted, arrested or suspended; but ultimate onset, peaceful,



useful and resolute, is certain and absolute. The advance guard of "relocation" has already come; the main army is behind ready to move when times are ripe for action and when the

results. Before many decades have passed the South will have comparatively no abandoned lands, whether of mountain, vale or prairie, whether in the pine or hickory or live oak sec-



VIEW FROM ROAN MOUNTAIN. ALTITUDE, 6306 FEET.

Ruler of the Universe gives the signal for a general advance. Knowing and believing this, I look even upon lonely waste places of the South with unconcern, and I patiently await inevitable

tion. She will be an immense, populous, opulent empire. She will have a composite industry of agriculture, manufacture and commerce. She will be aggressively enterprising, too, be-



cause of Northern influx. And this mighty productive, industrious, picturesque South will demonstrate its spirit, as well as its material potency, not only in its alpine region, but in the "Piedmont escarpment" and along the Mississippi valley, and on the nethermost plains of the Gulf and Atlantic. The same spirit that created a new St. Augustine—that dream of Arabian Nights—and sent its pulsations down the Indian river, even aspiring to clasp Key West—the outpost overlooking Cuba—with railway steel, will animate the whole South of the near future and revolutionize the continent. I trust that, as the South shall grow in material glory, she will also diffuse over all the land that better spirit of conservatism, true Union, genuine liberty and pure religion. I trust that she will not greedily and destructively abandon herself to the Golden Calf, but rather become, in all wholesome ways, worthy of temporal blessings which are promised to those who "Seek first the Kingdom of God." A New England Republican governor—now in dignified, comfortable, intellectual retirement—once told me that the North, some day, would be obliged to lean upon the South's conservatism, in morals as in other things, for security from forces of evil omen at home. Apparently that epoch is near at hand, if we can interpret certain signs of the times. The peaceful battle of the future civilization, therefore, promises to be fought with com-

binations much different from those obtaining in the martial combat of the past. In that tremendous coming time our very liberties may depend upon the Northern graft upon the South's autonomy. There may be, as there have hitherto been, desperate efforts to prevent the relocation of peoples Southward, but it will ultimately burst all barriers, just as the Mississippi river, rising in a hyperborean nook, finds its resistless way to the tropic Gulf, bearing to the South the rich soil of the Northwest and the spoil of half a continent. The Northwestern man settled in Louisiana's level lands well stated that he had to come South to find his father's farm, which had taken, via the Father of Waters, what so many Northerners should take—a Southern tour. Our brethren should come, for enlightenment, profit, diversion, settlement. First comers will be the wiser, because I have noticed that when a thrifty Northern brother gets a really good thing at the South, he does not let it go, even to Yankee friends, on ground-floor prices. But whether anybody likes it or not, this shifting of centres of population will come to pass. Even Wall street and rich, close corporations attached thereto may perforce contribute to the future greatness of a Greater South, in order to benefit themselves, for the cause of Southern prosperity is the cause of the whole Union, and this portentous truth cannot be too promptly learned and wholesomely applied.



## THE PEACH AND OTHER FRUITS IN GEORGIA.

*By F. H. Richardson.*

Within the last few years Georgia has come to be very widely known and highly regarded as a fruit-growing State, and the excellence, diversity and early maturity of its horticultural products have brought about a rapid development of this industry.

The first of the Georgia fruits to be shipped to markets outside of the State in large quantities was the watermelon, and this is now one of the staple products of the State. Last year nearly 5000 cars were shipped outside of the State, and averaged net \$40 a car to the shipper. About 1200 good-sized melons make a carload, and these can easily be raised on two acres in the melon belt of Georgia. It is too early yet to estimate accurately this year's crop, as it will not begin to move until the latter part of June. It is but just to say that the railroad authorities have given assurance of better rates this year than formerly, and that the Georgia railroad commission has to the limit of its authority exerted itself for the benefit of this industry.

Quite a large business is done in cantaloupes, as well as watermelons, and shipments of these often prove very profitable. There are several melon farms in the State this year which cover 100 acres and more, and from which the owners will probably reap handsome incomes.

Another Georgia fruit which is shipped quite extensively is the Le Conte pear. It was brought to Georgia in 1850, and was then called the Chinese sand pear. The name it now bears is due to the fact that Mr. John Le Conte, of Philadelphia, sent the first tree of this variety to the State. It was planted by his niece, Mrs. J. M. B. Hardin, at her home in Liberty

county. This pioneer pear tree is still vigorous and has attained immense size. As much as forty bushels of fruit has been gathered from it one season. Cuttings were taken from it in 1869 and planted in Thomas county, which is now the headquarters of the pear industry. The Le Conte is a hearty pear and rarely subject to blight. It suffered, however, from this cause last year and the crop was light. The trees are in excellent condition this year, however, and it is estimated that, at least 18,000 barrels will be shipped.

In good seasons, pear culture is very profitable. Last summer one grower from an orchard of five acres, 250 trees, shipped 180 barrels, receiving an average, net, of \$4.50 a barrel. Another grower, on one-quarter of an acre of remarkably fine trees, cleared \$145.

The Kieffer pear is also largely cultivated in South Georgia, and this fruit is especially valuable for preserving.

The cultivation of fancy plums is also quite extensive in this State. There are fifty varieties under the name of Botan plums alone, and shipments of these grow larger every year. Some of the large peach growers in the State make a very profitable side-issue of plum culture. Several varieties of the Japanese plum grown in this State reach immense size and are fully equal in flavor and beauty to the best products of California.

But valuable and attractive as are the melonfields, the pear and plum orchards of Georgia, the Georgia peach is now receiving more attention, both at home and from the outside world, than any other fruit grown in this State.

Several years ago, Hon. J. H. Hale, of Connecticut, in a speech before the

American Association of Nurserymen, said: "Having visited every fruit section of the United States—every fruit-growing section in every State of the Union—and had my peach-eye open, because I love peaches and peach culture, I just lost my head when I got in that section of Georgia, and I do not think, California not excepted, there is another such district in the United States for the growing of fruit."

This strong testimony has been cordially endorsed by prominent nurserymen from all parts of the United States, many of whom have made large investments in the peach regions of Georgia. The largest orchards in the State are now owned by Ohio men, who came here a few years ago on a tour of inspection, and were so completely captivated by the possibilities of the peach culture in Georgia that they proceeded at once to enter this attractive enterprise.

The first peach orchard planted in this State for the purpose of shipping fruit to Northern markets was that of Judge John D. Cunningham, which was laid out at Orchard Hill, fifty miles below Atlanta, in 1868. He planted forty acres, and lived to see his orchard not only a thing of beauty, but the source of a handsome revenue. In 1887 this orchard numbered 60,000 trees, and many times peaches shipped from it to Northern markets have brought as much as \$15 and \$20 a bushel, as they got there early and were of exceptionally fine quality.

Mr. John D. Cunningham, Jr., son of this pioneer in Georgia peach culture, is now president of the Georgia Peach Growers' Association and probably the largest individual peach grower in the State. He has faith that North Georgia has several counties which are quite as well adapted to peach culture as the best regions in middle and southern portions of the State. Mr. Cunningham either owns entirely or in part orchards in North Georgia which number over 200,000 trees. Shipments from these orchards last year were very extensive, and

profitable prices were obtained for their fruit.

One of the earliest and most enterprising peach growers in this State was Mr. John H. Parnell, brother of the great Irish patriot. About 1870, he planted a large orchard near West Point, Ga., from which he obtained remarkable results. It was frequently his good fortune to get the first peaches to New York, and for these he obtained magnificent prices. To him also belongs the honor of having made the first shipment of peaches from the United States to England. The fruit arrived at London in perfect condition, but, owing to the heavy expense of shipment, it barely paid for the experiment. Mr. Parnell predicted, however, that the time would come when immense quantities of peaches would be shipped from Georgia to England, and his prophecy may soon be realized. The railroads are now well supplied with refrigerator cars, and there is a transportation company which is already arranging to handle shipments of fruit from the South to Europe at greatly reduced rates, with all modern provisions for keeping the fruit fresh and sound.

Unlike the melon industry, the cultivation of peaches has grown steadily in this State, until it has reached enormous proportions. Last year's crop was immense, but that of this year will far exceed it. About 950 cars of peaches, containing over 2,000,000 pounds, were sent out from this State last year and netted nearly \$500 a car to the shipper. Shipments this year will probably be still larger, as the orchard acreage has been greatly increased and better arrangements have been made for handling the crop. The railroads have agreed to provide not only for lower rates, but better service, and the Georgia peach growers have perfected a thorough organization that will enable them to place their crop more advantageously than ever before. They will be enabled, by means of their central office at Macon, to ascertain the condition of various markets to which they ship, and can thus place their fruit where there is a de-



mand for it, instead of glutting one market and leaving another destitute, as they frequently did under their old loose methods of shipping.

It is hard to keep up with the advance of this industry in the State and to estimate very closely its present extent in Georgia. There are, however, on the line of the Central Railroad and its branches alone over 1,600,000 peach trees.

In the immediate vicinity of Fort Valley there are about 600,000 trees, and about Marshallville, thirty miles further down the Southwestern Railway, there are 300,000. Near this latter place is the famous orchard of Samuel H. Rumph, the originator of the famous Elberta, probably the most beautiful peach that reaches any market. Mr. Rumph went into the business when a mere boy, and for twenty years has given his entire time and energy to it. His success has been remarkable, and his orchard is a model in every respect. He has reaped a rich reward for his patient and devoted efforts, and his profits last year from his orchard and nursery were said to have been \$50,000.

There are 300,000 peach trees around Griffin, and 200,000 around Marietta. There are many other points in the State where the orchard interests are extensive, but not quite so large as those we have mentioned. Prominent among these is Tifton, on the Georgia, Southern & Florida Railroad. Tifton usually gets the first peaches to market.

The early Alexander is the first peach to ripen in Georgia, but it is so far inferior to varieties that come a little later that it is being very generally discarded. The most popular and profitable varieties are the Sneed, Triumph, Early Tilotson, Mountain Rose, Lady Ingold, Georgia Belle, Elberta, Globe, Chair's Choice, Lone Star, Pickett's Late and Wonderful. These have been mentioned in about the order in which they ripen.

Peaches are packed for market in either crates or baskets. Crates hold about three pecks, and baskets about one-third of a bushel. The basket is

coming into greater favor, because it is cheaper. The cost for crates for a carload of peaches is about \$80, while the same amount of peaches can be packed in baskets which cost only about \$35. Georgia, so far, has shown a remarkable lack of enterprise in the manufacture of crates and baskets. The bulk of the supply for this State comes from Petersburg, Va. There is a fine opening in Georgia for an extensive manufactory of these goods; they can be made out of the cheapest sort of timber, and the demand for them is constantly increasing.

It may interest some of the readers of the "Southern States" to know how the Georgia peach orchard is started. Formerly trees one year old were planted, but now what are called "June buds" are used almost entirely. The seed is planted in the fall and comes up in March; it buds in June, and this bud is then grafted into any desired variety. The growth of the bud is forced by frequently and judiciously breaking off the top of the little tree under whose bark it has been inserted. With this treatment it grows rapidly until frost, when the tree is then taken up, and may be planted at any time from November to April. It is put into the orchard at the same depth it had in the nursery, and dirt must be packed very firmly about it. Into each one of the holes for the young tree bone meal is poured and mixed thoroughly with the clay. Trees are usually planted 12x18 feet on rolling land and about 15x15 feet on level land, which gives about 200 trees to the acre.

The peach tree becomes productive very soon in Georgia. It bears frequently in its second year. I have known a peck of excellent peaches to be gathered from a two-year-old tree. The useful life of a peach tree averages from ten to twelve years. It is at its best at the age of five, six or seven years, and a first-class tree of that age can be depended upon for two crates in any good season. Land is so cheap in Georgia that, as a rule, when an orchard is exhausted the trees are cut down and the land planted in cotton



or some other crop, while fresh land is secured for a new orchard. All crops drain the soil of certain elements, and experience has proved that young peach trees do not thrive so well on old orchard sites. The necessity of changing the location of orchards every ten or twelve years constitutes no valid objection to peach culture in Georgia. As I have said, land is cheap, and even if the farmer is not able or does not wish to acquire more land, he can call into requisition for his orchards land that has been used for a few years for other purposes. It is very soon restored to fitness for peach culture by lying fallow or by bearing other crops.

There are many reasons for the faith that Georgia is destined to be the greatest peach State in the Union. In quality, its peaches are admitted to be superior to those of either Delaware or California. Georgia's advantages over Delaware are many and patent. Land in Delaware that is fit for peach culture costs from \$75 to \$150 per acre. Labor can hardly be had there at less than \$25 a month and board, yet even with these heavy expenses the Delaware peach grower makes a handsome profit when he gets an average net price of thirty-five cents for his crates of five-eighths of a bushel. In Georgia, excellent land for peach-growing can be had at from \$10 to \$25 per acre. Of course, lands directly on the railroad command the higher price, but I should say that abundant lands within easy reach of the railroads and admirably adapted for peach culture can be bought both in North and South Georgia for from \$15 to \$20 an acre. Labor is also much cheaper than it is in either Delaware or California. Men can be hired for \$9 a month and board, and the labor of women is even cheaper. Another great advantage which Georgia has over Delaware is that the Georgia peach reaches the market so much sooner. By the time the Delaware peach ripens the market is amply supplied with fruit from every quarter, and, of course, prices are very much lower. That the Georgia peach is su-

perior to the best California article will be testified to by every impartial and discriminating person who has tasted both. This claim is susceptible of absolute demonstration. While a bushel of California peaches, when evaporated, weighs from twelve to fourteen pounds, a bushel of Georgia peaches weighs only seven or eight pounds. Juice is what gives a peach its flavor, quality and value, and it will thus be seen that the Georgia peach contains far more juice and far less fibre than the peach of California.

The peach industry has already proved a vast benefit to Georgia, and there is every reason to believe that it will become immensely more important. It brings a large quantity of money into the State at a time when the regular farm crops are not ready for market, and already gives employment to a host of men and women. Last year one bank at Fort Valley cashed checks for labor in peach orchards in that vicinity to the amount of \$12,000 in one week. Women, boys and girls in towns and on the small farms find employment at very good wages in picking and packing fruit. The country people generally are quite willing to engage in this work, and at every prominent fruit centre in the State there is an air of thrift and liveliness at a season when the other towns are listless and dull.

It is quite certain that the manufacture of baskets and crates will soon be undertaken on a large scale, and this will give the State another important and profitable industry.

The Georgia Fruit Growers' Association, composed of practical and experienced men, will be able to do much to protect the rights and improve the profits of the fruit growers of this State. It will certainly enable them to place their products very judiciously; it will protect them against unprincipled agents, and will save them large sums of money in commissions. The association will also be able to deal more effectively with the railroads than the individual shipper possibly could.

The outlook for peach culture in



Georgia is brighter than ever before. Every man in the State who is largely interested in it has great confidence in its future, and hundreds of thousands of trees will be planted next fall. The Georgia peach has established its reputation. It is wanted everywhere, and people will readily pay better prices for it than they will for peaches from other States. There is practically no limit to the demand for it. The Boston Herald last year exulted in a long editorial over the fact that "real peaches" had at last reached that market. It referred to the arrival of a large shipment of "Elbertas" from this State, and in glowing terms eulogized their quality and flavor over the tasteless California peach and even the Delaware peach, on which that market has hitherto been compelled to rely.

This year all of the great cities of the North and West will be liberally supplied with Georgia peaches, and the prospects are that in both quality and quantity they will be superior even to the best of those that were sent out last year. It is not a wild estimate to predict that within the next five years the value of the peach crop in Georgia will go over into the millions. It has already enlisted the efforts of many of

the brightest and thriftiest farmers of the State, and has brought to us a large number of enterprising and worthy citizens from other parts of the country.

What Mr. Albaugh, the great Columbus (Ohio) nurseryman, and his associates have done will be done by scores of discerning men from other States when they see the possibilities of profit in the beautiful industry of peach growing in Georgia, and many of our own people will soon learn that they have in their command an easy and bountiful source of revenue if they will bestow intelligent attention upon peach culture.

Georgia is becoming a great grape State also. When Mr. Wm. W. Woodruff planted a large vineyard near Griffin in 1868 it was the only venture of the kind in the State, but now there are hundreds of extensive vineyards in Georgia, and many of them pay handsomely. The home market has a demand more than sufficient for all the grapes now raised in Georgia, and there is much room yet for this industry if properly pursued. There is hardly any section of the State which is not adapted to grape culture.

## APPLES AND APPLE-RAISING SOUTH.

*By M. B. Hillyard.*

A large apple orchard is something very rare in the far South, at least within the zone of my observations. Of course, my area of observation did not cover the entire South, and I have not been much of a traveler for the past fifteen years. But, while there is a tendency to enlarge, or, rather, begin apple raising, it is a very recent thing, very limited in its belt, and mostly confined to the summer varieties.

There is a good deal of reason for the insignificance of apple raising South. The fruit-raising furore communicated to the South through the

small fruits and peaches and plums, principally. The last two varieties bear earlier than the apple and outsell it. The small fruits pay well, yield well and bear at once, so to speak. Then the apple of the South (the early varieties) finds all sorts of competition from the other fruits and from Southern and Eastern peaches and small fruits: New Jersey, Delaware, Michigan, raspberries, strawberries, blackberries, and peaches from Delaware to a long way South. For the winter apples of the South there is found such a competitor in the whole apple-belt



of this continent that the South may be said, at this time, to be not "in it" as to raising winter apples at all.

Another reason why the South is in the business of raising winter (or fall) varieties of apples in that small way now marking the condition of affairs is, that the favorite varieties of Northern apples will not succeed South, except with few exceptions. The writer well remembers how, when a young man, he saw the delicious and superb winter apples (that succeed so well in New York, New England, Michigan) on exhibition at an agricultural fair in Dover, Del. The agent sold trees at a great pace, no doubt. But none of the apples succeeded in Delaware; such choice varieties as Baldwin, Spitzenberg, Road Island Greening, Seek-no-further and others. The above experiment in Delaware is a type of what the South has experienced with regard to winter apples, introduced from the North, that have failed South. The tree-peddler, with his highly-colored plates and his smooth tongue and his shameless deception, for all these years, has talked the South into buying varieties of apples that are failures South. If these Northern nurserymen would propagate varieties of apples that would succeed South and sell them here, there would not be so much ground for criticism. But their present plan is as much a fraud as it would be for Southern nurserymen to go North and East and sell to horticulturists there varieties of the fig or orange, by assuring purchasers that these were very hardy and would succeed there. If the Northern horticulturists are less gullible than those South, that does not alter the principle.

Then, undoubtedly, this prevalent disfavor of the winter apple South interferes much with an acquisition or attempt at production of new varieties. If a person South should discover a new very early peach, that carried well and was fine in size and color, it would be a fortune to him. The same principle would apply to a new strawberry, in large measure also to a cherry. But to find a new and great variety of win-

ter apple would be worth nothing, because there would be no demand for it; as witness the amazing inconsideration with which the South treated the Shannon apple, that wonder of Arkansas, which took the premium over all competitors at the Cotton Centennial here in New Orleans, 1884-85. I remember well with what exultation I hailed the victory, and said, "Now, we shall have a new era in apples. We shall soon see the Shannon on sale here in New Orleans, and measurably disuse this wretched, but popular, Ben Davis and such." And yet I don't suppose you could find a barrel of Shannons anywhere on sale in any city of the South; and I doubt if one Southern nurseryman in a hundred propagates it, or, if he does, sells any but the fewest number of the trees. And another illustration of the comparative disregard is the Johnson, a seedling originating in Mississippi, with which Dr. H. E. McKay, of Madison Station, Mississippi (the strawberry king, as he is designated) took the premium as the best new fall apple at the same great exposition just mentioned, where the Shannon took its premium. Had two such apples been discovered North or West the whole horticultural world would have been agog, and millions of trees sold in a very few years. I remember, in Delaware, we horticulturists thought we were getting the Hale's early peach very cheap at \$1 a tree, one year old. Look, too, at the Idaho pear, discovered a few years ago, and its price!

I have mentioned the Shannon and Johnson apples only by way of illustration. Doubtless there are many others very good. I would undertake to find on the Southern branch of the Illinois Central Railroad, in Mississippi and Tennessee, and in Northwest Louisiana, at least half a dozen new varieties of fall and winter apples; seedlings that constitute great accessions to the really large list of these apples that are hardly known to anyone, unpropagated and unappreciated. I hardly ever fail to discover something new in any trip I make, because I keep my eyes open. Only a few years ago



I discovered two seedling pears in Louisiana, both fine, one of which, it propagated, would be the greatest accession to the varieties of that fruit within the last twenty-five years. But I was not situated to push it, and did not care to "give it away." Why the Secretary of Agriculture does not see his way clear to put some one in the field to discover new varieties of fruit, South, is a mystery. Not but that something has been done, but there is such a broad, rich field totally unexplored. The South, for illustration, among her most foreknowing horticulturists, is yearning to propagate the cherry. And I have been hunting it for twenty-five years, and have found much which I hope to give to the readers of the "Southern States." But why should this be left in such a disregarded condition?

I have only alluded to the Johnson and Shannon apples by way of illustration. Undoubtedly, the South at large could add scores, if not hundreds, of varieties of choice fall and winter apples to the list of propagation if there were a demand. The question is, will there ever be a demand? Or, rather, the question is, will the South ever meet the demand? For the South consumes really an immense quantity of Northern apples. They sell, generally, higher in the South than oranges. You can buy choice oranges at the fruit stands in New Orleans at twenty-five cents per dozen, when you must pay fifty or sixty cents for a like number of choice Newtown pippins, Belleflower or Maiden's Blush. And even the Ben Davis, here as everywhere the popular variety, outsells choice oranges.

The winter apple, North and West, is a staple; and I observed that in Illinois the lands where apples were successful, and the farms containing good apple orchards, sold for far more money than ordinary farming lands. The home consumption of the fruit, the demand for export to Europe and the Southern demand, make the business profitable, and many new orchards are being planted.

But the South has so many new

things pressing her attention for adoption that raising winter apples has never come home to the consideration of her horticulturists. We buy Northern vinegar, made of chemicals; Northern pickles preserved in it; we have been buying our pork packed from hogs raised largely in their orchards; we buy their cider and champagne cider, and we buy their apples. But it is quite certain that the immense number of Northern and Western immigrants who are moving from their homes to various places South will not be content to go without apples, when they find they can raise as good here as in their old homes, and even better, as to many varieties. And in less than a quarter of a century you will find large droves of hogs in orchards sodded with Kentucky bluegrass, the orchards the planting of these Northern and Western immigrants. And there will be plenty of home-made apple cider and home-made cider vinegar, and pickle factories, and "apple-butter" will abound and the ever-present and dyspeptic pie. And like as not, Newtown pippins will be going from Charleston, S. C., and Savannah, Ga., to Europe, and the first or early ripe to New York, Boston, Philadelphia and Chicago; for I firmly believe that not only Piedmont, Va., but the mountains of North and South Carolina, Georgia, East Tennessee and Alabama, can raise that celebrated apple. It is a very shrewd bit of advertising to call it the Albemarle pippin in Virginia, and thus commend it to the world as peculiar in merit in that locality. Georgia is well playing the same game with the Elberta peach, and Crystal Springs, Miss., with her tomatoes, as North Carolina had her "golden belt" for her bright tobacco, and New Jersey, fifty years ago, for her peaches, and Herkimer county, New York, for her cheese, and Orange county, New York, for her "Goshen" butter. And I am happy to know how the Albemarle pippin was exempted by England from the tariff imposed on apples by special act of Parliament, and ad-



mitted duty free on account of the superior excellence of that fruit.

I have been greatly impressed with the merits of Mr. James Blakey's article in the "Southern States" for August, 1894, on "The Fruit Industry of Piedmont, Virginia." It is particularly valuable in the information conveyed to the practical horticulturist, as to what varieties of apples are successful there. One of the most dispiriting effects of experimenting in fruit culture is in the losses in time and money of fruitless experiment.

Another point of the utmost import is that it demonstrates there is a field for the Southern apple, which is one of the aims of this article to show. I firmly believe that the first yield, or early part of the crop, of the Southern apple may find in any year something of a market North and West, and in failure of the apple crop there a considerable market, and that all the time the South will furnish a market for Southern-raised fall and winter apples and largely supplant the apples of these seasons raised North and West and now consumed so largely South. I have more than conjecture for this, because some years ago, while on a tour of investigation in the mountains of North and South Carolina, I found luscious home-raised apples selling everywhere, and, my impression is, to the almost (if not altogether) exclusion of Northern apples.

As to summer apples South, one may say that almost everywhere the favorite Northern varieties do well. Certainly as low as (if not below) latitude 31°, except, perhaps, Western Texas. For some inexplicable reason, some varieties that do well in one locality seem not to do at all in other places where they might be expected to succeed. Thus you will find, for illustration, the Red Astrachan, Summer Queen, Early Harvest and Red June highly commended where the Yellow June or Early Strawberry are not.

In the year 1873, Dr. H. A. Swayse, D. Redmond and myself were sent as delegates from the Louisiana Fruit Growers' Association to the Quarter

Centennial meeting of the American Pomological Society, held at Boston, Mass., in September. There we made a report on the fruits adapted to what we deemed the association or its territory. It is not necessary to inform the older horticulturists of the country who Messrs. Swayse and Redmond were. Suffice it to say that they were practical men and had a national reputation. At that date we made this report as to apples: "We would recommend Early Harvest, Red Astrachan, Carolina Red June, Primate Garretson's Early, Yellow June, Early Strawberry, Bevan, Golden Sweet, American Summer Pearmain, Rhodes' Orange, Bruce's Summer, Yellow Horse, Cane Creek Sweet, Batchelor, Taunton, Hoover, Carter."

After years of investigation, over enlarged territory, I added to these, a list in my book ("The New South," Manufacturers' Record, 1887), the following list, found on page 281: "Summer—Striped June, Sweet Bough, Early Red Margaret, Hames, Carolina Watson, Family, Julian, Aromatic Cheese, Stanley's Seedling. Autumn—Bonum, Yopp's Favorite, Pennsylvania Cider, Tuscaloosa Seedling, Mamma, Philippi, Lawren's Greening, Carter's Blue, Buncombe, Junaluskee, Maverick Sweet, Yates, Ben Davis, Disharoon, Carolina Greening. Winter—Ferdinand, Cannon, Pearmain, Oconee Greening, Moultries, Nickajack, Hockett Sweet, Stevenson's Winter, Holly, Pryor's Red, Stansil, Shockley, Romanite Santa, Limbertwig. Cider apples—Dean Crab, Hewes's Virginia Crab."

Last summer I spent quite a while on the Southern branch of the Illinois Central Railroad, in the great fruit and vegetable centres of Crystal Springs, Terry, Madison *et al.* There I got much information, and had many notes on the apple, which I unfortunately cannot now find. I find allusions by Mr. J. W. Day, a large fruit-grower, to the Buckingham, a seedling brought by him from Anna, Ill.; a large, flat, red apple, yellow-fleshed; also the Benoni (a summer variety, red striped), introduced by him, bearing at three



years old from the bud. But of all the surprising information I got on apples was that from Doctor McKay, the "Strawberry King," already mentioned. He told me that the Russett family, in his latitude, Madison, Miss., succeeds better than in latitude 40°, especially the Roxbury Russett. I confess to having been amazed at this, and it opens a field to the South that surely some very considerable number of apple-raisers will occupy ere long. Possibly it may not be news to some Southern apple-raisers, but it will be to a great many. When it becomes known, generally, that the South can raise superb Newtown pippins and Roxbury Russetts, one hardly knows what better can be said.

As to the Ben Davis in parts of Mississippi (likely elsewhere), such superb apples can be raised that the average Ben Davis bears no comparison with it. Here, too, is a field, and the people who plant large orchards of

this variety will take time by the forelock and do a smart thing. It is the apple of great demand everywhere, and particularly South. It will be a good deal earlier here than North and West.

The Red Astrachan, South, is far superior to the fruit in any other location I have seen.

A very choice apple-belt is in the clays of Northwest Louisiana. And part of Arkansas now is effectively advertised as "The Land of the Big Red Apple."

Of course, I have omitted a good many varieties of apples that are successful in many places South, and I have named varieties that may not succeed in a number of localities. I have aimed mainly to show that the South is naturally a fine apple country, and that there is a great future for it. The next quarter of a century will teem with revelations as to the production of this fruit in the South.





## SOCIAL TRADITIONS OF THE OLD SOUTH.

*By Arnot Chester.*

It needs no pen of mine to describe the social code of the New South. It is simply the code of the rest of the world, appearing a trifle accentuated to us *old* Southerners, perhaps, by force of contrast with the one which preceded it.

But to readers of today it may possibly prove interesting to have a brief account of manners and customs so different from those now prevailing, that it is hard to believe they existed only two generations ago; for even in the quiet nooks and corners of the land, where memories of the past still linger, they linger as traditions merely, having long ceased to influence conduct or to mould manners.

Looking backwards, one can see that the change was a gradual one. Little by little the standard has been lowered and the lines of demarcation effaced.

Truth to say, in the days of which I write class distinctions were almost as pronounced in the South as are the caste distinctions of India, the only difference being that it was possible to pass from class to class.

The upper stratum of society was composed of the landed proprietors, the planters and the professional men. Within these sacred limits few could penetrate who were not "born in the purple." Occasionally, for some occult reason, impossible to explain, an outsider was admitted to the charmed circle; but as a whole, Southern society was eminently aristocratic. The relations between the classes were harmonious enough, though the distinctions were so sharply defined, perhaps I ought rather to say, *because* they were so sharply defined.

The shopkeeper, for instance, was treated with the most perfect courtesy

by his lady customers in their business intercourse, but he would never have dreamed of exchanging compliments with them across the counter, or of bowing to them in the street!

He and they equally recognized the fact that they belonged to different worlds and revolved in different orbits. Within these broad lines, of course, there were innumerable shades and gradations of difference. Nor was the gulf between the classes an absolutely impassable one. The retired tradesman, whose son had received a liberal education, might hope to see his grandson admitted within doors fast barred to himself. But it was an accepted axiom that "it took three generations to make a gentleman."

Of course, this did not apply to men of talent (who rise everywhere by the force of their own merit), but it was the process through which it was necessary for the ordinary "raw material" of vulgar humanity to pass before it was considered fit to be stamped with the wall-mark of gentility.

At the South the wealth of the rich never rolled up into the millions, but in their day and generation they were esteemed wealthy, and they certainly enjoyed all the real privileges and immunities that money can secure. They had an assured income sufficient not only for the supply of their necessities, but also for the gratification of their tastes, and as a natural consequence a most open-handed, large-hearted style of living prevailed.

Whole families frequently spent an entire season with other families, without the least feeling of obligation on the one side, or of imposition on the other. The question of expense never occurred either to hosts or guests.

Gifts intrinsically valuable were



freely bestowed by friend upon friend, and as freely received. Horses and even houses were sometimes given away, and smaller gifts were constantly interchanged. It was a common thing for a cousin or a brother-in-law, who was a planter, to keep a family supplied with rice year after year. The planter's code was a simple one: his crop, whatever it was, rice or cotton, was to be sold—that constituted his income; but all the smaller products of his plantation, his fruit and his vegetables, his poultry and his mutton, were only so many little *et ceteras* to be shared with his friends.

The same spirit animated the professional men. A doctor-friend would give many useful hints, for which he would have scorned to send in a bill. A lawyer-friend frequently furnished valuable professional advice, for which no fee was desired. While as for the innumerable nondescript little services for which nowadays one's nearest relatives appear to expect to be paid, they were then so invariably tendered gratis that the possibility of paying for them never even suggested itself to the mind.

Sunday at the South was universally observed. A Southern Sunday was almost as quiet a day as a New England Sabbath, though there were no "blue laws" to enforce its observance. But the people were generally sober-

minded and God-fearing, and those not themselves governed by religious considerations were nevertheless controlled by public opinion, which "public opinion" very strongly condemned anything like "pleasuring" on Sunday.

No reputable place of amusement was ever open on that day. Cheap Sunday excursions were unknown, and even riding and driving for pleasure on Sunday afternoon was pronounced by fashion to be in bad taste. People went to church or stayed at home, as inclination prompted; but no visiting was done, except among relatives and particular friends, and formal entertainments were never given on Sunday.

All of which goes to prove, perhaps, that the people were a primitive people. But surely the primitive virtues which flourished among them—truth, honesty, generosity, unselfishness—are still commendable in theory at least, though we have long since decided that they are quite unattainable in practice under the more complex conditions of modern life.

My subject is so interesting (to the writer at any rate) that it is hard for me to take leave of it. But fearing that already I have exceeded the limits of a well-bred article, I hasten at once to make my parting bow and retire.

# THE SOUTHERN STATES.

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## THE SOUTHERN STATES.

AN ILLUSTRATED MONTHLY MAGAZINE  
DEVOTED TO THE SOUTH.

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WILLIAM H. EDMONDS,

Editor and Manager.

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BALTIMORE, JUNE, 1896.

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The SOUTHERN STATES is an exponent of the Immigration and Real Estate Interests and general advancement of the South, and a journal of accurate and comprehensive information about Southern resources and progress.

Its purpose is to set forth accurately and conservatively from month to month the reasons why the South is, for the farmer, the settler, the home seeker, the investor, incomparably the most attractive section of this country.

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### The Sugar Bounty Decision.

We congratulate our Louisiana friends upon the Supreme Court decision that will compel payment of the sugar bounty. There never was a more equitable decision. Whatever opinion may be entertained of the bounty system, the fact remains that the government had, by legislative enactment, not only in one Congress made this enactment, but in another Congress, when the bounty was repealed, in revision of the tariff, the justice of carrying out one year's contract was conceded. How a subordinate official of the Treasury could have attempted to override a congressional law and refuse to carry it out passes ordinary comprehension. Whether this subaltern did this of his own motion or was inspired

by higher authority, we need not now inquire. The Supreme Court has decided the payment of the bounty money constitutional and mandatory, without undertaking to rebuke anybody connected with the arrest of justice. This decision affirms that the government must observe the obligation of contract, just as individuals do, and that it has no right to presume, in such matters, upon its own superior power or the presumed weakness of the contending party in equity. One unfortunate incident of this act of Comptroller Bowler was the friction engendered between Congress and the executive branch of the government. However, all's well that ends well, and while regretting that our Louisiana friends should have been compelled to remain a long time out of money justly due them, causing necessarily much embarrassment and irritation, we trust that they will soon be paid, and that much of the hard times may be mitigated thereby in the sugar-producing regions of the Pelican State.

### The Tennessee Exhibition.

Stimulated, no doubt, by the enterprise of Atlanta, the chief metropolis of Georgia, the people of Tennessee have inaugurated an exposition at Nashville, the capital of their State, which bids fair to equal, if it does not surpass, the wonderful manifestation at the Gate City of the South. The exhibition proper at Nashville will not be held until May 1, 1897, but a preliminary opening, with great ceremony, occurred on the first of June, and was a success in every particular except the weather, which happened to be rainy, much to the delight of the farmers of the State, if not to pleasure-



seekers. But rain did not dampen the ardor of the visitors, and Southern people are not afraid of being wet, especially in a patriotic cause. They know, too, that sunshine is not long suspended, and so it proved in this case, we believe.

Tennessee is a wonderful State, and deserves to be better known and appreciated everywhere beyond her borders. Tennessee's capital is a beautiful city, nobly located on a navigable river. It has an energetic population, and is famed for hospitality. No State has a more fertile soil than Tennessee. All of the crops, not of a tropical or semi-tropical nature, are produced, including cotton. It is a famous producer of corn, grasses, wheat, fruit and live-stock, with all of their varying kindred developments. It has abundant coal, iron ore, limestone, marble and nearly all minerals valuable to man. Industrial exploitation has been a marked feature of recent years, and the time is not distant when this State will be among the foremost in all kinds of manufacture. If, as the scientists predict, water-power is to be the most important factor in developing the motive powers of electricity, Tennessee will have few rivals in this respect, for her rivers are among the noblest of the world. Her mountain region is sublime in natural grandeur, and has become famous in song and story. Her timber lands will become more and more veritable mines of wealth. Some of the peaks of East Tennessee are 6000 feet high. Its geographical situation is admirable. At Memphis, destined to be one of the greatest commercial cities of the South, it is in touch with the mighty valley of the Mississippi and its tributaries, and through great trunk railways there linked to the West and Southwest. At Bristol it meets Virginia and clasps hands with the Eastern imperial domain. Chattanooga, a modern wonder, industrially, forms her central citadel. Her commercial communications are perfect, and, with the recurrence of the era of pros-

perity, which Prophet Benner establishes in 1898, Tennessee will advance gigantically in opulence, population and renown. She is 100 years in Statehood, but young in nationality. Her treasures in all material prospects have been merely skimmed, owing in part to conditions appertaining to a period before and since the war; but the twentieth century will find her in the front rank of first-class States, measured by the severest tests of progress. The remarkable movement (now in its incipency) of population from the Northwest to the Border States, as well as to the farther South, will halt many thousands of the most energetic of mankind in Tennessee. There are multitudes of Northwestern men who prefer a climate of some cold intervals to the balmy temperature of the semi-tropical South. Those pioneers of the new time will settle in Tennessee and make it superior to Wisconsin, Iowa, Minnesota, Nebraska, and even Ohio. Tennessee has all of the advantages of the Northwest, some vastly superior ones, and none of its drawbacks. Colonel Cowlam's theory of relocation, as a primal solution of our continental social problem, will have a marvelous illustration in Tennessee.

Seeing, however, is said to be believing, and therefore we urgently counsel our Northern friends, especially those who meditate a change of home, to visit the Tennessee exhibition. We are satisfied that the wonders there displayed in miniature of Tennessee's productions and possibilities, will stimulate many of them, not only to visit the famous stock farms around Nashville and the glorious valley of the Tennessee river, but push to Memphis, by the Father of Waters, to Chattanooga and to Knoxville. A visit to Lookout Mountain is one of the most inspiring tours, and once a man has beheld the different sections of the State he must confess that nature has left nothing undone to make it fit for the

habitation of the most exacting race. The people there have the marked kindliness of the Southern character, along with the indomitable vigor of the inhabitants of the most favored regions of the temperate zone. Education in the cities and towns has a wide and comprehensive scope. All of the comforts and necessities of modern civilization are at hand. But the first 100 years of Tennessee in material growth will have been as nothing compared with the majestic achievements of her second century. No man can compute what the State of Tennessee and the South will be in the end of the twentieth century, but the fancy of man may well be taxed to form anything like a just estimate of the stupendous fact.

### Peaches in the South.

We publish in this number an article on peaches in Georgia, by Mr. F. H. Richardson, editor of the Atlanta Journal. The magnitude of the peach-growing industry in the South is not at all realized. It is commonly supposed that California, New Jersey, Delaware and Maryland produce the bulk of the peach crop of the country. To those who have held this belief a study of some statistics on peach-growing will be interesting. According to the last census, the number of bearing trees in each of the chief peach-producing States was, in 1889, as follows:

Maryland.....	6,113,287	Texas.....	4,486,901
Kansas.....	4,876,311	Georgia.....	2,787,546
Delaware.....	4,451,623	Arkansas.....	2,769,052
New Jersey.....	4,413,568	Tennessee.....	2,347,699
California.....	2,669,843	North Carolina.....	2,133,004
Missouri.....	1,999,474	Alabama.....	1,280,842
Michigan.....	1,919,104	Virginia.....	1,218,219
Ohio.....	1,882,191	Kentucky.....	1,205,866
Pennsylvania.....	1,146,312	Mississippi.....	878,569
New York.....	1,014,110	South Carolina.....	711,138

That is, Texas had more trees than New Jersey or Delaware, and was exceeded by only two other States, Maryland and Kansas. Georgia and Arkansas had each more trees than California, and Tennessee and North Carolina had nearly as many. Connecticut is widely noted as a peach-growing

State, and yet there is not a Southern State that did not have more trees than Connecticut. The number credited to this State was 88,655, while the smallest number in any Southern State was 235,936, in Florida; nearly three times as many.

The total number of trees in the United States was 53,885,597, of which the South had nearly 40 per cent., as follows:

Virginia.....	1,218,219
West Virginia.....	450,440
North Carolina.....	2,133,004
South Carolina.....	711,138
Georgia.....	2,787,546
Florida.....	235,936
Alabama.....	1,280,842
Mississippi.....	878,569
Louisiana.....	317,132
Texas.....	4,486,901
Tennessee.....	2,347,699
Kentucky.....	1,205,866
Arkansas.....	2,769,052
	<hr/>
	20,822,344

The extension of existing orchards and the establishment of new ones has within the last few years gone on much more rapidly in the South than in the North. In Arkansas and Georgia, particularly, there has been notable development. It is probable that in each of those States the number of bearing trees is fully twice as great now as in 1889, the census year. In North Carolina, Florida, Alabama, Mississippi and Tennessee also there has been a great increase in the number of trees, and there has been some increase in all the other Southern States. On the other hand, the industry in the Northern peach-producing States has not had, on the whole, any great expansion. In Maryland, the greatest peach State, the extension of the industry in the mountain peach district is doubtless more than offset by the falling off in the tidewater section, where many orchards have been cut down and the land put to other uses. In New Jersey and Delaware there has been little if any growth. In Connecticut, New York, Pennsylvania, Michigan and some other Northern States the orchards have suffered great damage from "yellows," though many new orchards have been set out in these States and there has been a



considerable increase in California and Missouri. It may, therefore, reasonably be claimed that the South (even excluding Maryland and Missouri and adding these two to the Northern list) now has fully half of all the bearing peach trees in the United States, and that Arkansas, Georgia and Texas have probably more bearing trees than any other State, except possibly Maryland.

The yield of peaches in 1889 in the prin-

cipal peach-growing States was, according to the census report, as follows:

	Bushels.		Bushels.
Kansas.....	1,798,781	Georgia.....	5,528,119
California.....	1,691,019	Texas.....	5,106,332
Missouri.....	1,667,789	Arkansas.....	3,001,125
Maryland.....	803,019	North Carolina..	2,740,915
New Jersey.....	776,078	Tennessee.....	2,555,099
Ohio.....	687,112	Alabama.....	2,431,203
Delaware.....	457,201	South Carolina...	1,490,633
Illinois.....	341,178	Mississippi.....	1,324,354
Indiana.....	307,084	Virginia.....	1,052,000
Michigan.....	216,311	Kentucky.....	846,138
New York.....	169,976	West Virginia...	376,662
Pennsylvania.....	117,151	Louisiana.....	310,217
Oregon.....	69,934	Florida.....	230,290
Utah.....	69,910		
Washington.....	63,497		
Connecticut.....	37,295		



# IMMIGRATION NOTES.

## Another German Colony Located on the Southern Railway.

Mr. J. F. Jordan, the tobacco dealer in Greensboro, N. C., has consummated the sale of a tract of several hundred acres of land located within five miles of the city of Greensboro and from one to four miles of the Southern Railway, to a party of Germans from Pennsylvania. The purchasers propose moving to the property this summer, and will engage in general farming, fruit and vegetable growing.

## Louisiana Immigration.

The Shreveport (La.) Times says:

"Papers all over Louisiana are telling of the coming of Northern immigrants who find homes in various sections of the State. It is a pleasing task to chronicle these significant facts, for they prove beyond doubt that the tide of immigration has changed from the West to the South, and that in the near future Louisiana will, with the coming of the new north and south trunk lines, secure her full share of the newcomers. We copy the following item from the Baton Rouge Daily Truth to show what is happening in that immediate section:

"On Sunday there arrived in this city a Mr. M. H. Burr and family, of Paxton, Ill., who has come here to settle among us. About two months ago he was here, and was so well pleased with our locality that he purchased 400 acres of the Arlington plantation, upon which he will now reside. We give the newcomers a hearty greeting, and trust they may be happy and prosperous in their new home. Mr. Shannon informs us that another gentleman of the West has or will purchase land to be taken from the same plantation, and also move here within a week or two. In addition to these, some thirty thrifty Germans are expected here this week in search of land upon which to settle. These people wish to locate as near together as possible to form a community of their own.'"

A firm of land agents of De Pere and Green Bay, Wis., who have been very successful in the last six months in selling land in the Yazoo Valley to Northern settlers, have formed a company, to be known as the Yazoo Valley Immigration Co., with the intention of attracting Northern and Northwestern farmers to the Yazoo Valley.

It is said that about twenty English families have applied through a representative to Governor Lowndes for information as to the possibility of securing lands in Maryland suitable for truck farming. The inquirer states that the prospective immigrants are frugal, steady and industrious, and that they will bring some money with them. Governor Lowndes referred the letter of inquiry to Mr. Littleton T. Dryden, State superintendent of immigration, who expects to have, as soon as possible, in systematic arrangement all information necessary to meet just such inquiries.

Mr. A. Shulson, of Bowling Green, Ohio, has been prospecting in the neighborhood of Winston-Salem, N. C. Mr. Shulson is said to have a colony of prosperous Norwegians, which he desires to locate in a good section.

Mr. Hogap Bogigion, who is said to be the most prominent Armenian in this country, and Mr. S. S. Blanchard, an ex-senator of Massachusetts, accompanied by Mr. M. V. Richards, immigration agent of the Southern Railway, have been making a tour of the South with a view to acquiring a big tract of land upon which to colonize a large number of Armenians. It is understood that Mr. Bogigion represents a syndicate of wealthy and benevolent people in the East, who are determined to try and see what can be done toward colonizing as many Armenians in this country as possible. This is in accord with a suggestion made by the "Southern States" of last Feb-



ruary, pointing out that these people would be most excellent citizens for the South, their high civilization and Christianity being the chief reasons for their present sufferings under Turkish dominion. They are progressive farmers, and in climate and products their country is very similar to much of the South. Mr. Bogigion is said to be a man of vast means, and apparently determined to do some practical good for his people. He has appeared several times before congressional committees at Washington to tell what he knew from letters received from his fellow-countrymen, of the Armenian atrocities.

The Atlantic & Danville Railway, whose main line runs from Norfolk to Danville, a distance of 206 miles, has appointed Mr. J. O. Shelburn general immigration agent, with headquarters at Lawrenceville, Va. Mr. Shelburn is enthusiastic on the subject of immigration to Virginia, predicting great success for the section traversed by this road, which runs through the noted trucking region of Virginia, a distance of eighty miles; thence for probably forty miles across a country rich in general farming capabilities, touching the famous Meherrin and Roanoke river lands, through the bright tobacco belt of Virginia to Danville, one of the largest tobacco markets. To promote immigration along this line the Atlantic & Danville Land Co. has been organized, of which J. O. Shelburn is manager; C. D. Owens, president, and L. Treadwell, treasurer.

The Concordia Land & Improvement Association is pushing the work on its new colony town, Thorsby, in Chilton county, Alabama. The colony lands lie on both

sides of the Louisville & Nashville Railroad, in the centre of the county, half-way between and within forty-eight miles from two of the largest cities of the State, Birmingham and Montgomery. One lot in the residence portion of the town is given free of charge to every purchaser of a farm or orchard tract who, within a year builds a residence on it to cost not less than \$300. A considerable tract of land in the south-east corner of the town site is reserved for use as experimental gardens. From each corner of the city is laid out a broad avenue or street, extending through the colony in the directions of northwest, northeast, southwest and southeast. This arrangement gives every tract of land in the colony almost a straight road to the city.

Mr. S. L. Baker, mayor of Bellvue, Iowa, has purchased 880 acres of land in Escambia county, Alabama, at Canoe Station, on the Louisville & Nashville Railroad, and will engage extensively in fruit-growing, trucking and general farming. Mr. Baker is now building an eight-room house. He expects a large number to join him in the fall from his old home in Iowa.

Major W. L. Glessner, land commissioner of the Georgia Southern & Florida Railroad, states that he has sold 5260 acres of land near Ashburn, Ga., to the Ohio Colonization Association, of Dayton, Ohio. A notice of the plans of this association was published in the "Southern States" for May.

A party of Ohio farmers arrived at Petersburg, Va., June 10, with the expectation of buying lands in that section.

## GENERAL NOTES.

### Rev. Edward Everett Hale Advises The Invalids be Sent to the South.

Attention is invited to the following suggestive article on one phase of the attractions and advantages of the South which that venerable Massachusetts clergyman and writer, Rev. Dr. Edward Everett Hale, contributed to a recent issue of the New York Commercial Advertiser.

It is a splendid tribute from a man of large influence in New England and the North to the many Southern localities "where air and sun and all the conditions of climate are invigorating and inspiring." Dr. Hale's suggestion to "the more intelligent boards of administration in the Northern States" to "remove to Southern latitudes the invalids who are now pining under Northern winters," will induce many of the philanthropists and humanitarians of the North to investigate the subject, and while it may not and probably will not result in the transfer of any State-supported institutions from the North, it will cause many to select suitable locations and establish low-priced and yet thoroughly comfortable and attractive homes in the midst of pleasant natural and social environments, such, for instance, as that which Mr. Tufts, of Boston, has now well under way in the sand-hill, piney-woods section of North Carolina:

"Robert Stephenson, the inventor of the locomotive, was one day standing with an English gentleman on an eminence from which they could see a very distant train. Stephenson said to his friend: 'What is it which is drawing that train along through the valley?' The gentleman replied, with a laugh, 'Why, of course, it is one of your engines.'

"'Ah, yes,' said Stephenson, 'but what makes my engine go?' And then he added, in a reverential tone, that the Lord God had hundreds of thousands of years ago packed away enough of His sunshine, in ferns and other products of pre-historic times, to heat

the water from which rose the steam which pressed upon the piston which drove the wheels which bore the train along.

"The sun is as hot today as it was 3000 years ago, when these ferns and palms of the coal measures were glowing in their fresh beauty. We are in the position of bon vivants who, at a dinner which means to have everything nice, are eating in January the peas which were fresh in Paris the June before.

"We are greatly obliged to the foresight of the Parisian green grocer who canned these goods for use. They are better than no peas—or we try to think they are—and so we direct the caterer at the club to make a little pile of them around the mutton chops which he serves for our luncheon.

"Let us not forget, at the same moment, that we have brothers and sisters, not 3000 miles away, who have the same morning picked fresh peas in their own gardens, and who, at the moment when we enjoy the canned article, are eating peas which they or their sweethearts have shelled the hour before.

"The parable of the canned sunshine, as Stephenson presented it to his friend, is one which is now assuming importance in an economic point of view. England is alarmed every few years by the announcement that, before many centuries are over, her own home supplies of canned sunshine will be exhausted. But no man cares much for what is going to happen to his children or his grandchildren; and so England says cheerily that posterity may take care of itself, and that she will not borrow trouble.

"In our own country we are not so fortunate as our English cousins are. At the present moment the State of Massachusetts, in fifteen or twenty public institutions, is burning tens of thousands of tons of coal every winter, for the comfortable care of the insane, the idiots, the blind, the deaf, the dumb, the prisoners and the diseased.

"These tons of coal represent so many



cans of sunshine of hundreds of thousands of years ago. The Board of Commissioners for Charity and Lunacy are grateful that in Pennsylvania, in Nova Scotia and some other parts of the world these supplies are ready for their mining; and they and the legislature of Massachusetts are ready to pay good money that these tons of coal may be hauled to their doors.

"The people of the Northern States, however, would do well to remember that they are again more fortunate than the people of England and Scotland, because within the limits of the very nation to which they belong, that sun, which is the noblest emblem and agent of the love of God, has the same power which he had 300,000 years ago.

"The patient who droops in the close air of a Northern infirmary resolves on some fine day that he will go to Southern Georgia, or Florida, or Texas, or New Mexico, or California, and finds, to his joy, that he droops no longer.

"To follow the parable which we used in beginning, he finds the peas which he picked in his garden in the middle of January, and which are cooked to be eaten with his chop when the time of lunch comes, are sweeter and fresher and better than the peas which were brought from Paris after they had been packed six or eight months before, or possibly, if the dealer were shifty, some years before. He finds, in other words, that the sunshine before it is canned has more life-giving effects than it has after it has been packed 300,000 years.

"Under the same inspiration, then, which some years since began to send the cotton mills of the North to the country where the cotton grows, so that now our friends in South Carolina and Georgia are making stout cotton goods which begin to appear in all the markets of the world, it is beginning to suggest itself to the people who are not very slow, in the Northern States, that instead of taking care of an invalid in a close cell in a Northern winter, with a stove or a furnace well heaped with canned sunshine, there may be occasions when it will be better for that invalid to be carried into those latitudes where the sunshine is of to-day and does not have to boast of its antiquity.

"Societies have been formed in the

Northern States with the modest purpose of giving to such invalids information as to points in the Southern belt which are healthy, and where air and sun and all the conditions of climate are invigorating and inspiring.

"The more intelligent boards of administration in the Northern States must begin, now that travel is so simple and easy, to inquire under what conditions, and with what advantages, they could remove to the Southern latitudes the invalids who are now pining under Northern winters. It is simply to inquire how they can exchange canned sunshine of 300,000 years ago for the fresher tonic and food of today."

#### **American Fruits in Germany.**

Mr. J. C. Monaghan, United States Consul at Chemnitz, Germany, in a report on American fruits in Germany, says:

"Our farmers in the coast country from Maine to Florida might make huge profits out of their orchards. I am not sure that Eastern peaches and Florida oranges could not compete successfully with the wretched apologies for peaches and oranges offered at enormous prices in these markets. Of course, much must depend on the cost of ocean transportation. If this could be got down to seventy-five cents or one dollar per barrel there would be profits for producers, middlemen and retailers. As soon as these people know that they will get goods things at reasonable rates, they prefer them to bad wares, however cheap. The qualities of our fruits are well known. All that is required is a little enterprise to put them into the shops and a little energy with which to push them."

#### **The Yazoo Delta.**

It is very generally conceded that nowhere on this earth is there a section of country more fertile than the Yazoo Valley, in Mississippi. The Nile Valley, historic for phenomenal agricultural opulence, is not more productive than the Yazoo Valley. The soil is enriched by alluvium deposited by the Father of Waters for untold ages. It is not only supremely rich, but practically inexhaustible. Here are 5,000,000 acres—a principality in itself—requiring no artificial fertilization, and only needing "to be tickled with a hoe to blossom into har-

vest." Twenty dollars an acre is said to be a low estimate of what may be produced annually on these lands, even with the poorest and most thriftless methods of farming. What may they not be capable of under skillful cultivation?

The real value of the lands in the Yazoo Valley when cleared of timber is as high as that of any of the highly developed Northern States, where land rents for \$3 to \$6 per acre on a valuation of from \$50 to \$100 per acre. In the Yazoo Valley the lands, although the deadened timber may be standing upon them, will rent on January 1 of any year for \$4 to \$7 per acre.

What greater opportunity can be held out to the small farmer who is a renter in the North and West, who sees no prospect ahead of ever being able to own the lands he cultivates, than the chance to go into this country where he can buy lands at \$6 or \$7 per acre, lay out \$5 or \$6 or less per acre in clearing the timber off, and in four or five years become the owner of property that will never fail to produce at the very lowest \$20 per acre net? At an annual outlay no greater than he is now paying as rent, he can buy and clear a farm that will yield larger returns than the farm he is now working, and must grow more valuable every year as this region is more and more thickly populated.

### **"Infatuated with the South."**

Mr. D. A. R. McKinstry, of Athens, Ohio, has recently spent some time investigating the South, and he gives the results of his observations in a letter to his home paper, from which the following extracts are taken:

"I have visited the South several times during the last five years, and the more I observe of the development, resources and climate, the more I like the country in general, and certain sections in particular.

"In this article my observations will be confined mainly to Tennessee, Georgia and Alabama. There you have high altitude, pure water and delightful climate. In summer the temperature rarely rises above ninety, and in winter the freezing point is seldom passed. Statistics prove this to be one of the most healthful regions of our country.

"The South is experiencing a rapid

change socially, politically, industrially and otherwise. Everywhere I meet the same friendly greeting and exhortation: 'Come among us; bring your Northern friends and help us develop our natural resources and improve our agricultural interests.'

"Here and there many Northern immigrants have dropped in, and recognizing the great advantages of a fine climate with long seasons, abundant rainfall, productive soil and good markets, they have come to stay, and have already demonstrated how easily lands are reclaimed and their adaptability to the production of almost everything that is grown north of the tropics. And hosts of hustling Northern farmers, fruit-growers, gardeners, dairymen, etc., are following, and soon that region will be transformed into a vast expanse of productive and well-kept farms, orchards and vineyards.

"The soil is of two general classes; the red loam, with a limestone characteristic, that never wears out and will produce well of cotton, corn, wheat, oats, rye, clover, Bermuda and millet; and gray gravelly soil that with care and light fertilizing produces good general crops and abundant yields of fruit, berries and vegetables.

"In many cases a bale of cotton (500 pounds) per acre is produced, which I saw sell April 13, at Cedartown, Ga., at seven and one-half cents per pound, or \$37.50 per bale. That same land readily produces fifty bushels of corn, twenty-five bushels of wheat, fifty bushels of oats, 200 bushels of Irish or sweet potatoes and two and one-half tons of clover hay per acre. I saw lands in both Georgia and Alabama that after growing cotton year after year for nearly half a century, and never fertilized, still producing as above noted, and of fruit and berries the product and profit is simply incredible. Owing to the rapidly developing manufacturing interests of the country, much of this product finds a good home market, while the surplus reaches the Northern markets readily, where it always commands good prices.

"The region of which I write is watered principally by a system of wonderfully large springs of cool refreshing water, which form strong and swift streams which flow the year around and abound with fine fish.



Here and there is a spring or well of the noted chalybeate water.

"Malaria is almost unknown, while rheumatism, kidney and bladder, liver and stomach diseases, with all their horrid attending disorders, are rare. This favorable feature is no doubt directly attributed to the pure water supply. This region is not annoyed with mosquitoes and flies; with the temperature at ninety the heat is not felt as it is in this latitude, and the nights are cool and refreshing for sleep.

"My wife became infatuated with the South, and is firm in the faith that the climate and water would restore the wasted physical energies of many Northern people. The manufacturing, mercantile and agricultural industries of the South are as yet in their infancy; but development has begun in earnest—it is a united effort—and each certainly offers an inviting field to those seeking locations or contemplating a change. To such I would say, go and investigate, and in all probability you will realize your fondest expectations."

#### **Midsummer Fruit Fair.**

The third annual midsummer fruit fair of the three counties, Berrien, Worth and Irwin, in Georgia, will be held at Tifton, Ga., Wednesday, Thursday and Friday, July 8, 9 and 10, 1896. There will be a display of ripe peaches, pears, plums, apples, grapes, melons and other fruits, as well as garden and field products, giving an excellent object-lesson of the resources of South Georgia. Visitors to the fair will have an opportunity to visit some of the great orchards and vineyards in the fruit belt of Georgia, and see the fruit picked, packed and shipped by the carload. During the fair there will be held a convention of Northern farmers and fruit-growers who have settled in Georgia.

#### **Improvement in Southern Farming.**

The following is taken from an address by Dr. Charles W. Dabney, United States Assistant Secretary of Agriculture, delivered June 2 at a meeting of farmers of Virginia held at Ashland, Va.:

"The year 1870 may be taken as the beginning of a new era in the South. The clouds of war had lifted, the atmosphere had cleared, and the sun was shining

brightly and warmly once more upon a brave people who had turned from scenes of death and destruction to the work of rehabilitating their farms and homes. Obedient to the instructions of the great leader whom they had followed in war, the old soldiers returned, in 1865, from the camp to the farm and "pressing" either a broken-down war horse or an old government mule into service, went to work ploughing fields. By 1870 they were fairly well settled and equipped again for work, so that we may take this date as a good starting point for our investigations.

"Mr. Mulhall, the great English statistician, in a recent article in the *North American Review*, gives us some very interesting figures compiled from our censuses for 1870, 1880 and 1890. He shows that while the wealth of the New England States between 1870 and 1890 increased 60 per cent., the Middle States 88 per cent. and the Prairie States 330 per cent., the Southern States, including the Virginias, the Carolinas, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, Arkansas, Kentucky and Tennessee, increased from a total of values in 1870 of \$2,827,000,000 to \$9,928,000,000 in 1890, or more than 350 per cent. The Pacific States are the only ones that made a greater increase, all values there having sprung into existence between the years 1870 and 1890 showing an increase of 1000 per cent. The increase in the Southern States from 1880 to 1890 was from \$6,448,000,000 in 1880 to \$9,928,000,000 in 1890, or more than 50 per cent. This is chiefly the product of Southern agriculture."

#### **THE LESSON OF LIVING AT HOME.**

Coming to the subject of diversified farming, Mr. Dabney said:

"This brings us to the consideration of the most remarkable change in Southern agriculture in the past thirty years, namely, the diversification of agriculture, resulting especially in the production on the farm of a larger portion of the food of man and beast. Virginia farmers have always been thrifty in this respect, but even they have learned during the last twenty years the lesson of living at home. The old-time cotton planter undertook to make cotton pay for everything else and still had a profit. He was a man of one idea and one crop. He made cotton and bought his corn, his

bacon and even his hay. The farmers would deliver their cotton in town and take back loads of hay and oats, of flour and meal, upon which to feed their hands and their stock, and even the housewives would come to town and buy creamery butter and Northern eggs with which to make the Christmas cake. Now all this is changed. The planters who kept their corn cribs in Cincinnati and smoke-houses in Chicago have either failed or learned better. The younger generation of cotton farmers own corn and their own fat hogs. On a trip through the cotton section last summer I found the warehouses in the country towns, which at that season were usually full of bacon and cornmeal, standing almost entirely empty. The railroads report to us that there has been a wonderful diminution in the number of cars laden with bread and meat which they have hauled into the South. As evidencing the changes from exclusive cotton planting which have taken place in South Carolina within the past year or two, the Charleston News and Courier's annual review of the trade and business of that city for the year ending September 1, 1894, showed the importation of bacon during the year to have been 1640 carloads, or 41,000,000 pounds. The same review for the following year showed a reduction of those figures by 546 carloads and 13,650,000 pounds. The reduction in importations of corn for the same period was 225,000 bushels, of hay 9750 bales and of flour 46,981 barrels. The reduction in hog products was nearly 14,000,000 pounds, which, at the average price of 1894, would amount to nearly \$1,000,000. When it is remembered that Charleston is only one of several large distributing points in the State, that Augusta, Savannah and Atlanta also supply a large territory through their railroad connections in the State, the aggregate reduction of importations and consequent saving to the State, even for the year ending September 1, 1895, must evidently have been very great. The saving to the State of South Carolina, as above indicated, is estimated to have been (annually) \$5,000,000.

#### DAIRY CROPS.

"The figures showing the increase in the acreage of grass and forage crops are very striking. Alabama and Georgia mowed over three acres, Arkansas over five, Mis-

issippi over seven, South Carolina over ten and Florida over twenty-three acres in 1889 for every acre mown in 1879. The South is not only growing its own grain, but also its own hay and forage crops. This means more and better stock, meat, milk and butter. According to the reports made to the Department of Agriculture, there has been an increase of 2,500,000 head of hogs in the South in 1896 as compared with 1890. This increase has been chiefly in the great cotton States—South Carolina, Georgia, Alabama and Mississippi. How is it with milch cows, which are one of the best evidences of family thrift? In 1880, there were 2,500,000 milch cows in the South; in 1890, 2,800,000, which number remains about the same in 1896. This is not a great increase in numbers, but the butter production tells the story. In 1880 the Southern States produced only about 90,000,000 pounds, or less than seven pounds per capita, of butter. In 1890, the same States produced 156,000,000 pounds, or even ten pounds per capita. In other words, between these dates the output of butter from practically the same number of cows has been nearly doubled, showing that better stock has been introduced and better methods of feeding and care practiced. The improvement in this respect has been especially marked in Virginia, where there has been a large increase in the number of neat cattle, more than half of which are milch cows. In 1880 Virginia produced 11,500,000 pounds of butter, as against 18,700,000 pounds in 1890. The production of cheese doubled also. The census figures with regard to poultry are just as striking as those for milk and butter. The State of Virginia, for example, trebled the number of its poultry between 1880 and 1890, and increased its egg production proportionately.

#### SOUTH CAROLINA'S FERTILITY.

"To a great extent intensive cultivation has taken the place of extensive cultivation, especially in cotton-growing. This was strikingly illustrated when the census statistics of cotton production in South Carolina were first published. It was generally stated that South Carolina could not have made that amount of cotton. Careful investigation, however, proved the correctness of the figures and made manifest the fact that the unexpectedly large production



was due in great part to improvements in the method of cultivation. Cases where 500 pounds of cotton were raised to the acre were found to be very numerous; an average of 750 pounds per acre was by no means uncommon, while in the case of a few small farms it was as high as 1000 pounds per acre. One of the most successful planters wrote: 'We farm on the intensive system and have brought our farms up to a high state of fertility gradually and therefore permanently.' It was subsequently ascertained that while the total area of improved land in the State had increased 27.18 per cent., the amount expended in fertilizers had increased 45.39 per cent.

#### TRUCK FARMS.

"The trucking industry, or the business of growing early vegetables and fruit for shipment to Northern markets, is one of the most remarkable developments in Virginian and Southern agriculture in recent years. Probably no single industry has brought so much money into the South within the last thirty years as this one. The annual crops of garden vegetables, such as early potatoes, beans, cabbage, cucumbers, spinach, lettuce, asparagus, and of fruits, such as oranges, strawberries, pineapples, watermelons, etc., have been worth a great deal more to the South in actual money than has the lumber, the tobacco, the mineral products, or any other of the great staple products which are commonly supposed to bring revenue to the country.

"The establishment of this industry has resulted in a remarkable advance in the value of land. Many farms on the Atlantic seaboard which were almost worthless, or which sold for from \$2 to \$5 per acre before truck farming was introduced, have advanced in value from \$40 to \$200 per acre, according to location and convenience to market.

"The lands best adapted for early vegetables contain only 3 to 9 per cent. of clay, and from 60 to 80 per cent. of fine and medium sand. The finest truck soils around Norfolk have, for example, an average of about 8 per cent. of clay and 65 to 70 per cent. of fine and medium sand. Such soils are well adapted for growing early potatoes, asparagus and melons. Soils containing from 6 to 12 per cent. of clay are more retentive of moisture and somewhat colder,

but are still well adapted for certain crops, such as tomatoes, peas, spinach and cabbage. More clay than this is found in the heavy coarse wheat lands, which may be much more productive, but are always a great deal later, because, doubtless, they are much colder. As to the profits made, it is stated that on a farm of ten acres one farmer raised and sold \$200 worth of Irish potatoes, \$100 worth of cucumbers and over \$100 worth of tomatoes, besides smaller sums on other vegetables, cabbage, turnips, etc. He maintained also twenty head of cattle, two good horses, and sold enough milk and butter to pay the entire expense of the farm and family. Another farmer raised \$1200 worth of Irish potatoes on seven acres and enough other products to maintain and pay all the expenses of his family. I cite these instances to show what a small truck farmer can do. The income of these men was as **much** as that of many a cotton planter cultivating 500 or 600 acres of land.

#### CULTIVATION OF FRUITS.

"The growing of small fruits is usually considered a part of the trucking industry, as these fruits are grown upon the same soil and usually by the same persons. Strawberry-growing has already reached enormous proportions in the South, and is steadily increasing. The American people seem to have an insatiable appetite for this delightful fruit, and there is no telling yet how many strawberries they will consume. The same is true of watermelons and the canteloupes. Thousands of carloads of melons are annually shipped North over our various railways, while shiploads go by water to all the Eastern cities. The enormous development of these industries is too well known to require notice here."

#### Truck Farming in Eastern Florida.

The truck business along the East coast for the past season has been nearly 100 per cent. greater than it was last year. The crops gathered and sent to market have also proved much more profitable than for many seasons; and in consequence farmers are much better off financially and feel greatly encouraged. During the past six or eight months the development of the East coast has been marvelous. New settlements have been colonized and new towns established all along the line, partic-

ularly through Brevard and Dade counties. Progress continues to march southward along the coast, and before another year shall roll around the increase in population and business promises to be double what it is today.

The total number of crates hauled by freight by the railroad does not represent one-half of the total number shipped, as it is estimated that more than one-half goes forward by express. Those competent to judge say that fully 100,000 crates of vegetables have been shipped by freight and express from stations along the East coast to market during the six months ended April 30, and that good prices have been obtained throughout the season. The bulk of the increase over a corresponding time for last year is from the lower end of the line, where new country is being rapidly put in cultivation, but the increase is very small compared to what is expected next season. But the lower portion of the East coast is not the only locality that is making progress in the raising of early vegetables. A careful canvas made around Hastings Station, a thriving settlement eighteen miles southwest of this city, on the way to Palatka, shows that the farmers and truckmen there are not permitting the grass to grow under their feet since the frost robbed them of their oranges.

In a table furnished by Capt. W. W. Jarvis, general freight agent of the Florida East Coast Railway, Hastings is credited with shipping 956 crates of vegetables by freight. The station agent, however, says that a great deal more than half the product went forward by express.

As Hastings shows a fair average of the increase in vegetable growing of the different points along the Florida East Coast Railway, a detailed account of what has been produced there will give a fair idea of what other localities are doing. A carefully prepared table gives the output of the settlement for the seasons of 1895 and 1896 as follows:

	1895.	1896.
Cabbage .....	30	45
Peas .....	2	4
Irish potatoes.....	50	75
Sweet potatoes.....	85	95
Oats .....	20	70
Strawberries .....	30	60
Tomatoes .....	6	15

In addition to the above, many small crops, such as corn, snap beans, lettuce, eggplants, etc., were raised and shipped, as well as 8000 hothouse cucumbers, against 4000 last year.

In comparison, the crops of this year were heavy, while those of a season ago were light. Last year the prices were unsatisfactory, while this year they were all and more than was expected. For instance, strawberries sold in the New York, Boston and Washington markets at from thirty to fifty cents per quart. It cost the producers from ten to twelve cents per quart to send them to market in refrigerator boxes, netting them from eighteen to forty cents per quart. While strawberries were selling in St. Augustine for five cents a quart, the growers at Hastings would not sell them at home for less than fifteen and twenty cents. The market did not break until all of the crop had been disposed of; then Georgia strawberries took up the trade.

The fine hothouse cucumbers from English seed, ranging in length from twelve to eighteen inches, were disposed of to the large hotels, in the State, there being very few left at the close of the season to send elsewhere. These cucumbers averaged \$3 per dozen at the hothouses. New potatoes were also disposed of at good prices, the growers netting from \$5 per barrel and upward. Crops this year were not only good, but they were early, and for that reason good prices prevailed. Unless Florida truckmen can send vegetables to market ahead of any other point, there is very little money in the business. When the weather and conditions are favorable, which is the case five out of six years, no business in the State pays better than raising early vegetables.

Along this coast there has been sufficient moisture in dews and light rains to keep corn, potatoes, rice, melons, etc., from burning.

Next fall the truckmen will plant twice the acreage of last year, while many new planters will develop new land. The East coast, which up to within a few years has been rather backward in trucking, owing to the good profits made from citrus culture, is making rapid headway in diversified farming, and in future the prospects are



bright for success in whatever may be undertaken.—The Citizen, Jacksonville, Fla.

### **The Georgia and Alabama.**

Vice-President Cecil Gabbett, of the Georgia & Alabama Railway, says that the business of his line is holding up satisfactorily. Fitzgerald is a great point on the system. The colonists are perfectly satisfied, and are getting on well. The artesian well, which the railroad company is having bored, is about 350 feet down. It is now going through rock. Mr. Gabbett states that he expects to get water when the rock is pierced. Once artesian water is brought to the surface there will be no question about the health of the colony. Thus far, there has been no sickness to speak of. The colonists who went down last fall and winter are acclimated now.

"Next fall we expect another heavy influx of settlers," said Mr. Gabbett.

### **Cash in Cabbages.**

W. J. Chambers, of Orange Lake, Fla., says he made this year over \$5000 net from forty acres. He further says that off two and one-half acres of lettuce he received net returns of \$750, and that L. R. Smoke, of Orange Lake, off seven-eighths of an acre, received over \$400 for lettuce.

### **What the South Can Offer Immigrants.**

The Bolton (Miss.) Times presents the following as some of the inducements the South has to offer immigrants: "Everything here is favorable to new comers of whatever political opinion or religious creed. Land is cheap; it is here for the having, and for sale from \$1 per acre up, with a climate unsurpassed, especially Central Mississippi. While lands are very cheap, the idea of getting something that is very valuable for nothing is played out. Value has possession here as well as elsewhere, and there are farms in this State as productive as in any section of the United States that may be had at one-fourth the price of similarly productive lands in the East or West. The man that has a good farm generally realizes the fact, and is sufficiently contented to let well enough alone and remain where he is and make the best of life. Farms of this class come high, from the fact that, as a rule, a man knows

when he is doing well. The immense resources of the South is sufficient inducement for the miner or manufacturer to come, and to the health seeker this section is especially favored, and those who are afflicted with incurable complaints so often found in colder climes can at least find rest and relief here."

### **The Cities Interested in Agricultural Immigration.**

The owners of the old plantations of the South want to sell part of their holdings—indeed, largely, have to sell. The time has come. To whom are they going to sell? Can they find any buyers? The white people of the South have all the land they want and more besides. Consequently there is no demand in the South for land; and there will not soon be from Southern people. The only salvation of the large Southern land owner is white immigration. The best immigration for the South is the farmer population of over-crowded sections of the North and Northwest—Americans. Let this immigration be invited by the South.

How can Southern cities expect to attain large growth with their surrounding country sparsely populated, or "unsettled," as a foreigner recently said on a visit to the South? In Georgia there are thirty-one people to the square mile; in Massachusetts there are 269. Of course, sparse population and small productiveness are the principal reasons why the South has not greater wealth. It is vitally to the interest of cities to aid in the settlement of their surrounding country by immigration. —Augusta (Ga.) Chronicle.

### **The Proper Handling of Fruits.**

In view of the near approach of fruit season the following extracts from a bulletin of the United States Department of Agriculture will be interesting just now. There is undoubtedly room for great improvement in both the packing and the marketing of Southern fruits. The advantages of earlier maturity and finer flavor as compared with the product of some other sections, is often in large measure offset by bad packing and injudicious distribution. The publication from which the extracts given below are taken relates specifically to peaches, but much of this admonition

will apply equally well to other products:

"Picking and packing are matters which require the personal attention of the grower. These cannot be trusted to hired labor without strict oversight. The peach should be picked and packed as carefully as an orange; should never be poured from basket to basket; should never be bruised in handling; should be carefully assorted by grades, and should be put up for market with an eye to attractiveness, so that the best prices may be obtained. It is not strictly proper, however, to put red netting over green fruit. There is just the right time to pick for market, and this is something to be learned by experience—a day too early and the peaches are green; a day too late and they are over-ripe, and they will be soft and bruised and unsalable before they reach the consumer. No fruit requires greater expedition and better judgment in picking and marketing, and in these particulars the peach is strikingly in contrast with the orange, which never worries the grower, but may be picked and marketed any time from November to April, barring accidents from unexpected frosts.

"In general, peach growers in the Eastern States are very careless—almost indifferent—as to the manner of shipping fruit to market, and the result is that such fruit, while often of a very superior quality, rarely brings as good prices as inferior fruit put up with special pains to make it attractive. The baskets in general use in the Eastern States are too large for retail trade. Growers of peaches on a large scale in New Jersey, Delaware and Maryland seem to think that they cannot handle their vast quantities of fruit in small baskets. Growers in Michigan and California have learned better, and send their fruit out in much more attractive form, the result being that they get better prices. Florida fruit also comes to market in good shape, and the Florida crate is one of the best. The choicest grades of peaches should never be sent to market in large baskets, but each fruit should be wrapped separately and sent with as much care as eggs if the best prices are desired. For the canning house and the wholesale trade, the Delaware basket is undoubtedly one of the most convenient forms for shipment. Inferior fruit

should be kept at home and dried or fed to the pigs. The unprofitable handling of a large part of such fruit might be avoided by thinning, as already suggested.

"On some accounts it is highly desirable that the fruit should be transported by water, if the distance is not great and the journey can be made rapidly; otherwise it must go in cars, and the extra jar must be compensated for by rapid delivery and sale. Of course, when peaches are shipped long distances in warm weather particular pains must be taken to see that the cars are properly iced, and that there are no delays in transit, and when they come from the Pacific Coast they must necessarily be picked green. Eastern growers have an advantage over those on the Pacific Coast in the much finer quality of fruit grown and in being near to market, so that their peaches may be allowed to ripen on the tree, something very necessary to the full perfection of this fruit; but these great advantages are largely lost by carelessness in packing and shipping, and consequently the California peach growers are generally able to command a better price in New York markets than Eastern growers. Mention has already been made of the desirability of planting orchards where competition in transportation exists. This affords to growers of the choicest fruit a reasonable guaranty that the whole of their profit will not be swallowed up by exorbitant freight rates.

"In years of great abundance, another serious cause of loss is due to what are known as 'slumps' in the market. Most Eastern-grown peaches find their way to a few large markets, where prices necessarily break down when a large quantity of fruit is suddenly thrown upon them. At times when a glut exists, even the best fruit will scarcely pay for the baskets in which it is shipped, much less for transportation, picking, packing, etc., and this may happen several times during the season. This ruinous state of affairs is not attributable to overproduction, but to maldistribution. The crying need in the Eastern States is for a system of distribution which will prevent gluts in the market. It is well known that at the very time when these 'slumps' occur in New York and other large centres hundreds of smaller towns in the interior cannot procure peaches at any price.



"The writer has frequently paid five cents apiece for quite ordinary peaches in interior towns in New York and Pennsylvania and farther west, when the finest peaches could scarcely be given away in New York and Philadelphia. This suggests that much loss could be avoided by a well-organized system of distribution. Just how this shall finally be brought about is a difficult problem to solve, but it is certainly one of the things which peach growers must study to accomplish. It is worth the earnest consideration of pomological associations, boards of agriculture and all who are interested in growing peaches.

"It would seem that there might be some arrangement with the local dealers in many of the smaller towns in the Eastern United States and with large dealers in the cities, whereby telegraphic advice could be sent every day during the season to some centrally located place in each peach region and thence communicated to all the growers. In this way it would be known where the market was full and where empty, and shipment could be arranged accordingly. Co-operation is the keynote of success. Indeed, without hearty co-operation and compact organization little or nothing can be accomplished; and yet to secure and maintain such organization presents the chief difficulty. Home consumption is another way to avoid gluts in the market; also, the judicious use of canning and drying houses."

### **Beginning of the Watermelon Season.**

The watermelon season has begun. Georgia was the first in the field this year, with a carload shipped on June 3 from Piddock, a station on the Plant system. The Macon Telegraph states that the first week's shipments of early melons amounted to nineteen cars, the first car being from Georgia. Nine cars have been turned over to the Ocean Steamship Co. for shipment to the Eastern market, and six cars have gone through Savannah by all rail for New York. Four cars went to Western markets, two of them being from Georgia and two from Florida. Out of the fifteen cars that went through Savannah, twelve cars were Georgia melons and three Florida melons.

A prominent commission merchant of

New York, who receives a big share of the melons shipped from Georgia and Florida, gives an interesting statement as to the receipts of watermelons in that city. He says:

"This market is almost wholly supplied by Georgia, Florida, South and North Carolina, Maryland, Virginia and New Jersey. The melons arrive from the different States successively in the order in which they are mentioned. Missouri and other Western and Southwestern States, which produce watermelons extensively, find markets for their products nearer home.

"It has been estimated by experts that when the crops are full there are annually received in this city about 20,000,000 melons, but what the quantity will be this year is difficult to predict until later in the season. The supply, when full, comes from the different States mentioned in about the following quantities: Florida, 1,600,000; Georgia, 11,000,000; South Carolina, 2,000,000; North Carolina, 1,600,000; Maryland, 1,600,000; Virginia, 1,100,000; New Jersey, 1,100,000—total, 20,000,000. When the melons are received they are carefully culled and classified as 'primes,' 'mediums' and 'seconds,' and are sold to fruit dealers, grocers, hotel-keepers and others in lots ranging from one dozen each to large truckloads. As the season advances the prices steadily decline, and the market frequently becomes so glutted in mid-season that only nominal prices can be obtained, and heavy losses are experienced by shippers and receivers."

On the farm of Capt. E. B. C. Hambley, Rockwell, Rowan county, North Carolina, there is a very fine herd of cattle, said to be 150 in number. One hundred cows are now being milked, and these yield, it is reported, an average of seven pounds of butter each per week.

At Beeville, Texas, about a month ago Messrs. T. N. Hall and R. T. Hicks, of Pittsfield, Ill., closed a contract for the purchase of 4700 acres of land in Bee county, ten miles from Beeville, for \$25,000.

It is estimated that the truck shipped from New Berne, N. C., last year amounted to seventy trainloads, or about 240,000

boxes and barrels, and 150,000 packages by steamer. The value of this truck is supposed to have been about \$1,000,000.

It is reported that a company has been formed at Orlando, Fla., to experiment in the growing of rubber trees, shrubs and vines in the vast waste lands in the southern part of the State. Mr. Flagler is said to have donated 300 acres of land at Bay Biscayne, in Southern Florida, and, it is stated, that in case the business prove profitable, he will grant from 10,000 to 20,000 acres more.

The colonists at Linton, Fla., give the following showing as to their success in trucking. The figures show the number of vegetables thus far shipped and the highest and lowest prices that have been received: Beans, 100 crates, \$1.50 to \$2.50; cabbage, fifty barrels, \$2 to \$3; cucumbers, fifty crates, \$2.50 to \$6; lettuce, fifteen barrels, \$3 to \$6; potatoes, fifty barrels, \$5 to \$10; tomatoes, 1320 crates, \$3 to \$6. This is considered a remarkable showing. At this time last year there was not a single vegetable produced in or about the site of Linton.

Mr. W. W. Duson, of Crowley, La., visited Lake Arthur, La., about a month ago with a party of investigators, among whom were Mr. and Mrs. R. H. Lyons, formerly of Kansas City, who contemplate assuming proprietorship of Hotel Arthur, on the lake, and making it a summer and winter resort for Northern people. Mr. Lyons, it is said, will also invest in some farm property in Acadia parish. Mr. Isaac M. Lichtenstein, of the firm of H. Lichtenstein & Son, and Mr. Isidore Hechinger, of the firm of S. Gumbel & Co., of New Orleans, are said to have invested heavily during the past year in the section of Louisiana about Crowley and the new town of Lockwood, at the southern terminus of the Midland branch railroad.

Mr. Henry Hubbard, a scientist, and Mr. G. H. Williams, one of the most enterprising men in Florida, are about to begin a new industry in Florida—the manufacture of camphor. They are said to have planted on their Haw Creek land 1300 camphor

trees, and Mr. Collins Hubbard has had 1100 trees planted. So far by experimenting a small quantity of good camphor has been made, which will be sent to Washington for analysis. The camphor has been made from the leaves of the tree by a very simple chemical process, which only requires a properly-constructed apparatus to produce the camphor in larger quantities. Mr. Hubbard thinks that 100 pounds of leaves will produce two pounds of camphor, the cost of manufacture being light and the camphor worth now sixty-eight cents a pound wholesale. The trees are full of leaves all the year round, and are not easily damaged by cold in this latitude, having passed through the notable freezes of last year with slight damage.

The largest grower of scuppernong grapes in America is Col. Wharton J. Green, owner of the famous Tokay vineyard near Fayetteville, N. C. This vineyard, said to be the largest east of the Rocky mountains, has over sixty acres in scuppernong vines. Colonel Green, the owner, has published an interesting pamphlet on "American Grape-Culture," with a description of his vineyard.

Mr. James F. Jordan, of Greensboro, N. C., is said to have consummated a sale recently of 470 acres of fertile farming lands four miles north of Greensboro, which will be divided up into tracts among a number of families who will farm for a living. The land was sold to a syndicate, and the colonists are reported to be Australians.

## CORRESPONDENCE.

### A Flourishing Colony in Alabama.

*Editor Southern States:*

In accordance with your request, I have the pleasure to send you a few facts in regard to Thorsby, the new Northern colony in the centre of the State of Alabama.

It was twelve months ago, or thereabouts, that the restlessness and unsatisfactory conditions of the people in the Northwest culminated in one community in the sending out of a couple of agents to look up a new home for eight or ten families, who wished to emigrate to a more congenial clime. The low prices of wheat and other grains, the



severe seasons—long, cold winters and short, hot summers—the costly farm machinery and other expensive requisites on a farm in the Northwest, the continual drudgery necessary in order to keep the mortgage from increasing—all these things are making the farmers up North exceedingly weary, and the result is beginning to manifest itself in the ever-increasing emigration to the sunny South. A great deal of advertising by railroad companies, land corporations and the States themselves turned the tide of immigration into the Northwest. A little judicious advertising on the part of the South is what is needed to bring new settlers into the Southern States. Every Southern State can offer superior inducements to the home-seeker. Every Southern State should advertise that fact so that the home-seeker may know it and take advantage of the opportunities offered. There should be a commissioner of immigration appointed by every State in the South. The resources of the State should be advertised throughout the land. The Scandinavians, Germans and other desirable immigrants should be given information in their own language. A few thousand dollars spent annually by the State in the cause of immigration would bring the very best results. True, some of the Southern States are beginning to “let their lights shine,” and railroad companies and a few private corporations are sending out circulars and pamphlets, which are eagerly read up North by the intending settlers. But a good deal more could be done and should be done, especially by the States themselves. But I am digressing.

The two agents who were sent out to look up a location for a colony of eight families visited a great number of places in the South, especially in the States of Georgia and Alabama. They found many desirable places for a Northern colony, but the locality which suited them best was the “Chilton Plateau,” or the famous highlands in the centre of Alabama, in Chilton county, on the great Louisville & Nashville Railroad, midway between the cities of Birmingham and Montgomery. This locality seemed to possess all the requisites for an ideal Northern colony—good climate, good soil, good water, good market and good

transportation facilities; and a sigh of grateful relief, “Here we rest!” went up from the souls of the faithful emissaries, and they called the place Thorsby, presumably in honor of the great Thor, the mighty deity of the gallant Northerners of ancient lore. When the emissaries came back and told their families and friends about the beauties of the country they had visited, they found that everybody wanted to go, and that they would have to provide land for many more families than had been originally figured on. Thus it came to pass that the “Concordia Land and Improvement Association” was formed, who went to work and secured sufficient land to accommodate any number of people from the North, and ever since there has been an influx of desirable Northern people into the new colony at Thorsby.

As yet the place is in its infancy, but already many substantial improvements have been made, and the work is steadily progressing. Thorsby, the new town, is located about four miles south of Jamison, and has a beautiful location. Several buildings have been erected, amongst them a large hotel, a saw mill, stores, etc. The surrounding lands have been platted into 10-acre tracts, which are sold for vineyards and fruit raising, while the lands a little further out are utilized for general farming, and there are no better lands in the South for fruit raising and general farming than right here in Thorsby. The colony is not very large yet, but is constantly increasing, and the best of it is that everybody seems to be well pleased with their new home.

K. G. FAEGRE.

Thorsby, Jamison P. O., Ala.

### **The Southern Pines Convention.**

#### *Editor Southern States:*

I have just returned from one of the most interesting meetings I have ever attended, and one which I believe will be of vast benefit to the South. I refer to the Southern States Settlers' Association meeting, at Southern Pines, N. C. About 800 persons were present, and it was an “experience meeting,” with the experiences related from full hearts—hearts overflowing with the idea that the South is, above all others, the place for homes, and a missionary



spirit which desired to tell others that they, too, might come and reap the benefits of residence. There was no effort at display; no high-sounding phrases or bombastic speech, but plainly told stories whose very plainness carried conviction to the hearts of those who heard. Men were there who had resided in the Southland for thirty years, coming back to make homes where they had first come only to take part in destruction; others were there who had been here for time measured simply by weeks, but all filled with enthusiasm and love and bent upon speaking such words as would convince the minds of Northern citizens when heralded through the press. There was a distinct patriotism, which, though the speakers were nominally representing their own States, refused to be bound by such narrow lines, and constantly broke through those lines in pleas for the South, as a unit, and not as distinct and separate State entities. For years the Manufacturers' Record has been working faithfully and well to bring out from the shadow into which it had fallen, and from under the misapprehension which had covered it as with a mantle, this beautiful, yea, not only beautiful, but practical Southland. It showed its beauty and drove home by stubborn facts and figures its practical business, manufacturing and agricultural possibilities. Then came other periodicals to the help of the cause, and then the "Southern States" magazine, in its peculiar field. To the Manufacturers' Record and the "Southern States" magazine, of Baltimore, the South owes more of its present prosperity than to any other source. This is not written, Mr. Editor, as flattering, but is the consensus of opinion of all those with whom I have talked, and their name is legion. As vice-president of the Southern States Settlers' Association, representing South Carolina, I thank you for the work you have done in the past, and ask for your continued co-operation, feeling that in it we have a strong arm to lean upon and an exponent which carries with it the evidences of truth and honesty, and a convincing power above all other in persuading people to come and see.

JOHN P. COFFIN,

Florence, S. C.

## NEWSPAPER COMMENT.

### More Small Farms Needed.

The massing of capital in order to conduct business on the largest scale is now the tendency in almost every branch of manufacturing industry. In this way, by employing the best methods and the most expensive machinery, most of the small dealers and manufacturers have been forced out of business. Of late years this has gone still farther, and the large capitalist has been either obliged to join some trust or to be crushed by it. Some have thought that in this method lies the remedy for the depression that has for a number of years been suffered by the farming industry. If wholesale methods and the employment of large capital are necessary to make other industries profitable, why should not the same means produce like results in farming?

Those who ask the question overlook the fact that farming on an extensive scale has always been practised in this country. While it is true that this has mostly been with insufficient capital, it is likely that even with an unlimited supply of money the farming could not be made profitable over large areas under one management. There are several difficulties which confront the wholesale farmer at the start. Very few men have the requisite executive ability to handle large bodies of laborers and get as much out of their work as they would earn working for themselves. It is very difficult to get good farm help now, and the difficulty is likely to prove greater rather than less. Farm work requires the constant and active thought of those engaged in it to a far greater extent than does any branch of manufacturing industry. The workman in charge of a machine becomes himself in time something like the machine which he handles. The workman on the farm is in partnership with nature, and he must vary his work with all her changes. The idea that anybody can be a successful farmer is the greatest mistake that can be made. The successful farmer must be a thinker, and such men are less common than is generally believed. The men who are thinkers can generally get employment at something that will pay better than farming.

But the chief reason why farming on a large scale cannot be made successful is



that enough manure cannot be either made or purchased on a large farm to maintain fertility. The large farmer almost invariably grows the crops which have the greatest facilities for harvesting in improved labor-saving implements. These are grain crops and all very exhaustive. They quickly reduce fertility to the point where the crop, even with these facilities for harvesting it, will not pay for growing. It is only by the continued extension of wheat-growing in the Northwest into new territory that the cultivation of this crop in 100-acre fields is possible. This cannot last many years longer. When the area of uncropped land is exhausted, the wheat-growing of the future must be done on smaller farms, which will necessitate growing a larger crop per acre. This has become necessary already. The low price of wheat leaves no profit if grown extensively, except on land that has never previously borne more than two or three crops. After this the bonanza wheat farm with the cream of its fertility taken off must be slowly restored to productiveness by being devoted to stock-growing, to dairying and to mixed husbandry.

What is wanted in most parts of the country is the cutting down of too large farms, and their subdivision into small places, with a greater amount of capital to work them. It is a mistake to suppose that money cannot be made on small farms of twenty to forty or fifty acres. If their owner is quick to perceive what his land is best adapted to growing, he can make more money on one of these small farms than anyone can on five times as much land devoted to the crops in which there is the strongest competition.—The American Cultivator.

## BOOKS AND MAGAZINES.

"The American," a weekly journal published at 119 South Fourth street, Philadelphia, under the editorship of Wharton Barker, is one of the most able and powerful of the advocates of the free coinage of silver. The issue of the American for June 13 contained a translation of an article, prepared a short while before his death a few months ago, by the great French economist, Cernuschi, on the adoption of free coinage by the United States, from

which the following paragraphs are taken:

"But if I were a citizen of the United States, and were convinced that Europe, by reason of England's attitude, is fixedly hostile to the establishment of a stable monetary parity between gold and silver, obstinately rejecting all ideas of international bimetallic agreement, then I should cease to be an international bimetalist, which nearly all my friends in the United States are, and should go over unhesitatingly to the camp of the silver men. \* \* \*

"The present monetary policy of the United States is consequently very advantageous to the interests of England, a gold monometallic country, but it is utterly ruinous as regards the foreign financial relations of the United States, and especially for its native producers.

"This is why, inasmuch as England's attitude prevents the realization of international bimetalism, and condemns one-half of the world to gold monometallism and the other half to silver monometallism, I would not hesitate, were I a citizen of the United States, to become—I, Cernuschi, the father of international bimetalism, as I am everywhere called—a silver monometallist.

"From a theoretical point of view, the free coinage of silver at 16 to 1, re-established by the United States without the concurrence of Europe, would be a vicious solution, but it would nevertheless be a step in the direction of international bimetalism, for, under the regime of the new standard, the productive power of the United States would receive so enormous an impulse, and this development would have such a disastrous effect upon the economics and financial interests of England and the other European nations now governed by the gold standard, that it may be confidently predicted in advance that the course of events would force the adoption of international bimetalism as the only true solution even upon those who, today, deny the possibility and efficacy of it."

McClure's Magazine for July will contain a fine series of portraits of Longfellow, furnished by the poet's daughter, and Elizabeth Stuart Phelps will publish her recollections of Longfellow, Whittier and Holmes. The same number will contain an illustrated paper by Cleveland Moffett, showing the exact status at the present moment of the



horseless carriage, indicating the revolution that impends in travel and traffic. "Lincoln as a Lawyer" and other interesting articles, besides the usual complement of fiction.

The June Review of Reviews publishes an exhaustive account of Professor Atwater's investigations on the subject of foods. It is not generally known that this inquiry is being prosecuted under the auspices of the national government. The Review article sums up the results thus far reached. Robert Stein, of the United States Geological Survey, gives in this number an authoritative account of the Alaskan gold-fields; Baron Pierre de Coubertin has an interesting article on the Franco-Russian alliance. The "Money Question" is discussed, "Greater New York," "The Growth of St. Louis," "The British Education Bill" and "The Slump in South Africa." The coronation of the Russian Czar has suggested a character study of that young ruler, which is published in this issue of the Review.

The Home Magazine, published at Binghamton, N. Y., in addition to its large quantity of original matter, makes a practice of giving each month some of the best things in prose and verse from the latest foreign periodicals, after the manner of the Eclectic and Littell's Living Age. The profit realized from publishing this magazine is devoted to the work of building the national home for commercial travelers at Binghamton.

During June, articles on the following subjects will be published in Harper's Weekly: "The Republican Convention at St. Louis" (profusely illustrated); "The Destructive Cyclone at St. Louis;" "The Coronation of the Czar;" "The Yale Crew for Henley;" "Opening of the Red Lake Indian Reservation." S. R. Crockett's serial, "The Gray Man," will be concluded, and a new novel by W. D. Howells, entitled "The Landlord of the Lion's Head," will be begun. Illustrations for Mr. Howell's story have been made by Smedley.

Among the striking features in the Atlantic Monthly for June are "The Politician and the Public School," by Mr. G. L. Jones,

and "Restriction of Immigration," by Gen. Francis A. Walker. Paul Leicester Ford contributes an able historical study of "Lord Howe's Commission to Pacify the Colonies," embodying a hitherto unpublished manuscript. Other readable articles are by Mrs. Catherwood, Mrs. Olive Thorne Miller, George Parsons Lathrop, Henry James and T. Russell Sullivan.

Harper's Bazaar presents every week the different changes in style evolved by Dame Fashion. The number for June 5 contains illustrations of Summer Toilettes, Summer Bonnets and Hats, Summer Costumes, Paris Toilettes. There are also interesting articles and poems by Candace Wheeler, William Hamilton Hayne and others; the serial, "Mrs. Gerald," by Maria Louise Pool, continues.

The supplement to Harper's Weekly for June is largely devoted to "China Today," concluding the observations and studies of that country by the members of the World's Transportation Commission. The Great Wall, the Chinese Railway, and Russian Influence are among the interesting topics discussed and illustrated. Apropos of the beginning of the yachting season, there is a double-page drawing by T. de Thulstrup, illustrating the recent improvements in the house and grounds of the Larchmont Yacht Club. The recent opening to settlement of the Red Lake Indian Reservation is the subject of an illustrated article.

The June Ladies' Home Journal contains a paper from President Harrison on "The Pardoning Power and Impeachment," both subjects being comprehensively discussed; John Gilmer Speed gives some surprising statistics in an article on "Conducting a Great Hotel," and Dr. Parkhurst's paper, "Substitutes for a College Training," is very practical. There are various other articles, some humorous, some instructive, all interesting. The June Journal makes it evident that its editor's promise, made in December, to give his readers the best twelve issues of the magazine they have ever had, is being fulfilled. By the Curtis Publishing Co., Philadelphia. \$1 per year; ten cents per copy.



## MISCELLANEOUS.

We have received from the Experiment Stations of New Jersey and Connecticut copies of their annual reports for 1895. The New Jersey report is the sixteenth issued, and the Connecticut report is the nineteenth. These documents are rich in valuable matter and might be profitably as well as curiously studied by our Southern farmers and planters. We do not, as a rule, know enough of the progress made in all sections of our wonderful country, and these reports furnish the desired information as to the highest Northern development at the East. They contain, besides, in special articles and in reports of experiments and tests, a vast amount of information of value to farmers, gardeners and fruit growers everywhere.

"Hay Substitutes." By C. S. Phelps, Bulletin No. 17, June, 1896, Storrs Agricultural Experiment Station, Storrs, Tolland county, Connecticut. Sent free on application to the Station.

Those who have read the entertaining articles contributed to the "Southern States" from time to time by Mr. Charles Hallock will be interested to know that he is now the editor of a recently-established sportsman's paper, the *Western Field and Stream*, published at St. Paul, Minn. Mr. Hallock has been well known for a generation as journalist, editor and magazine writer. He was the founder of *Forest and Stream*, and there is probably no man in America better equipped for the editorship of a sportsman's journal than he. The *Western Field and Stream* is superbly gotten up.

### Onion Culture.

"There are few vegetable crops of more importance to the rural population of the United States than the onion crop. The relatively large profits which it is possible for the skillful grower to obtain from a limited area have rendered the cultivation of this bulb especially popular with those possessing small tracts of land, while gardeners residing in localities whose soils and climate are pre-eminently adapted to onion culture have found it profitable to till large areas. Twenty-five to 100 acres in one field is not an unusual thing in such localities. Large yields overstock the market some years, resulting in very low prices; but the prices received during a series of years make onion culture, as a rule, a profitable enterprise where the soil and climatic conditions are favorable.

"Notwithstanding the extensive production of onions in the United States, hundreds of thousands of bushels are annually shipped to our ports from Bermuda, France, Spain and Cuba. This fact demonstrates that the home demand at all seasons of the year is not yet fully supplied by growers of our own country. The bulbs of foreign varieties are superior in quality to those originated in this country, such as the *Yellow Danvers*, *Red Wethersfield* and *Silver Skin*. The imported bulbs are also placed on the market before the gardeners in the North

can mature their crops, but the long season of California and certain parts of the South renders it possible for these sections to cultivate successfully the foreign varieties and mature the onions almost, if not quite, as early as the countries named."

The above is the introduction to *Farmers' Bulletin No. 39, "Onion Culture,"* by R. L. Watts, instructor in horticulture at the University of Tennessee and horticulturist of the Tennessee Agricultural Experiment Station. The bulletin has thirty-one pages and three illustrations, and considers such topics as selection and preparation of soil, fertilizing, cultivating the crop, selection of seed and of varieties, growing onions from sets and seed, transplanting, irrigating, harvesting, production of onion seed, and mentions two important enemies of the onion.

This bulletin is for free distribution, and requests should be addressed to the Secretary of Agriculture, Washington, D. C.

There is now ready for distribution by the United States Department of Agriculture to all applicants a bulletin on "Spraying for Fungous Disease," No. 38 of the *Farmers' Bulletin* series. It is four years since there was published in a former bulletin "a summary of the more important methods of combating some of the destructive diseases of fruits." During this time many improvements have been made in the work, and for this and other reasons it seems desirable to now bring together, in brief, practical form, our present knowledge on the subject. The question as to whether it will pay to spray has long since been answered in the affirmative, so it is not necessary at this time to enter upon any argument in regard to this phase of the subject.

The contents of the bulletin are as follows: "Fungicides or Remedies for Plant Diseases;" "Methods of Applying Fungicides;" "Treatment of Grape Diseases—Black Rot, Downy Mildew, Powdery Mildew and Anthracnose;" "Treatment of Apple Diseases—Apple Scab, Bitter Rot and Powdery Mildew;" "Treatment of Pear Diseases;" "Treatment of Quince, Cherry and Plum Diseases."

That the ripening of cream in butter-making is caused and controlled by bacteria is a recognized fact. But bacteriology has yet much to determine as to just what micro-organisms produce good butter and just how they act. Much has, however, been done in this direction, noticeably by the Storrs Experiment Station at Storrs, Conn. Bulletin No. 16 of the Station, just issued, is "Bacteria in the Dairy," and contains reports of investigations by Prof. H. W. Conn on the effect of bacteria on the flavor and aroma of butter. The results are most interesting. It is sent free on application to the Station as above.

The *Southern Field* for May, published by the Immigration Bureau of the Southern Railway Co., contains a great deal of useful information regarding that part of the South traversed by the road, the States of Virginia, North Carolina, South Carolina, Georgia, Alabama, Mississippi,



# THE SOUTHERN STATES.

JULY, 1896.

## THE PECAN.

A brief article on "Pecan Culture," printed in the "Southern States" something more than a year ago, aroused so much interest in this new industry, was so widely copied and brought so much inquiry for further and more specific information, that it has been thought well to now publish such an article as will cover the whole ground of pecan-raising.

Some interesting testimony is furnished by the last United States census, the census office having for the first time made a special investigation for the purpose of ascertaining the extent and value of the production of semi-tropic fruits and nuts in the United States. The material from which these statistics were compiled was obtained direct from the growers upon schedules specially prepared for that purpose, and by personal visits of special agents to sections of the country where the products are grown. These investigations were made in the States of Florida, Georgia, Mississippi, Louisiana, and Texas, and the statement is made that "pecan culture in Northwest Florida and all the Gulf States has apparently just begun to develop some of its wonderful possibilities as a reliable and profitable crop." According to the published figures, there were in 1889 in the district named 27,419.50 acres of pecan trees, representing 214,988 bearing and 657,980 non-bearing trees, with a crop value for that year amounting to \$1,616,576.50. It is instructive to note that even at that time the value of the pecan crop was second only to that of oranges in the entire list of semi-tropic

fruits and nuts grown in the United States, including California. As the census office estimates that more than 1,500,000 additional acres in Florida and California alone are suitable for the planting of pecan trees, to which must be added probably a like number for the other States of the South, it is seen to what an enormous extension the pecan industry is susceptible, when less than 30,000 acres, with about one-third of the trees bearing, produced in 1889 over \$1,600,000 worth of nuts and took rank in value second only to that of the orange crop.

The acreage of bearing pecan trees, according to the census reports, was for 1889 by States as follows: Florida, 2155; Louisiana, 2000; Mississippi, 1073; Texas, 563; Georgia, ninety-seven; California, seventeen—truly but a small beginning, when viewed in the light of the possibilities presented by the Gulf States alone. As will be shown by the testimony given herewith, there are very large sections of Florida, Alabama, Georgia, Mississippi, Louisiana and Texas altogether suited to the raising of the pecan, and in portions of other Southern States, notably South Carolina, it has been found by a practical test of twenty years' culture that the pecan can be grown with profit in almost any region where the hickory tree abounds, although the evidence appears to favor the southerly latitudes of the United States for the production of the heaviest, richest and most finely-flavored nut.

The testimony of successful growers given in this article is sufficient to



arouse a considerable degree of enthusiasm in the mind of any reader. Over a large area of country, in a variety of soils and under circumstances calling for few of the trials, annoyances and disappointments incident to almost all the undertakings of the husbandman, here is demonstrated to be an industry which can be prosecuted merely as a side issue if desired, and which, beginning at from ten to twelve years from the seed will yield a profitable return, practically unaffected by seasons, markets, blights or pests, and which after fifteen or twenty years will give a profit of hundreds of dollars an acre for generations.

There are, of course, some important technical points to be considered, and, as in every other undertaking, the amount of brains put into the work shows a direct ratio to financial results. The subject is a fascinating one, and the language of prominent growers will be read with interest in following the various steps in the culture of the pecan, from the seed to the harvest.

An interesting writer and a successful grower of pecans is Hon. Arthur Brown, of the Rivera Pecan Nursery, at Bagdad, Santa Rosa county, Florida, who says in a letter to the "Southern States": "I have heard of pecan trees bearing in six years, though I have never had them to bear sooner than the tenth year. As a rule, the bearing in paying quantities begins in from fifteen to twenty years, and the increase yearly thereafter is very certain. At twenty years old the yield should be not less than 100 pounds per tree, which, sold at fifteen cents per pound, makes the tree worth \$15 in income, and if in grove form, at forty feet square, gives twenty-seven trees per acre, which at \$15 per tree gives \$405 per acre. I have trees over fifty years of age from which I have sold 700 pounds per tree at twenty cents a pound, giving \$140 per tree, which would be for an acre of such trees \$3780. I do not believe pecan culture can be overdone, for at only five cents a pound the income of 20-year old trees is sufficient to justify the planting not only for the owner, but for pos-

terity also, and not only for the income derived therefrom at twenty years old and for ages thereafter, but also for the valuable wood for axe-handles, plow-handles, etc."

It is agreed by the authorities that a generous alluvial soil is best suited to the location of a pecan grove, though the trees will flourish in any good soil, with a clay subsoil, preferably where there is plenty of moisture, but not standing water. Damp, boggy soil will not do, and though land which overflows is to be avoided for young trees, yet no ill effects from this source are seen if the tree is more than a year old and is not in leaf at the time of overflow. Lands along creek bottoms, the margins of lakes and like localities will produce thrifty trees, and Mr. Brown states that he has seen splendid specimens on high pine land four miles from a water-course, on land with a top surface of a dark loam, with clay subsoil. As the pecan tap root will penetrate thirty feet into the earth, and lateral roots are thrown out in all directions, so it is commonly reported that a pecan tree cannot be blown down; the more porous the soil the more rapid will be the growth, and to assist in opening the way for the roots, one grower, Mr. Herbert Post, of Fort Worth, Texas, strongly recommends the use of dynamite wherever there is a subsoil, which he explodes at the bottom of a two-inch augur hole sunk into the ground six feet below the bottom of the hole into which it is proposed to transplant a tree. He makes the claim that at a cost of fifteen or twenty cents a hill a growth many times greater can thus be secured in the same length of time.

As the pecan tree thrives best in a generous soil, most growers recommend the use of fertilizers. Says Mr. Brown: "Fertilizing is beneficial, and if regularly done will bring the tree quicker into bearing, but spasmodic fertilizing is absolutely harmful, and no grove will be first-class treated that way. The best fertilizer is a compost of stable and hog-pen scrapings, dead leaves, rotted grass, dead animals, fish, bone dust, ashes and muck,



mixed up together, covered with a foot or two of good black earth, and this covered with dead grass, and on this pour each day all the house and kitchen soapsuds and greasy water and let stand until ready for use."

Regarding fertilizers, the following is the advice of the manager of the Stuart Pecan Co., of Ocean Springs, Miss.: "Have a place to pile everything in a compost heap that has any value as a fertilizer. The three principal ingredients which the tree requires to make its growth, also to produce well, are potash, nitrogen and phosphate. Potash is found in ashes of all kinds; also kainite, a substance resembling rock salt, which is shipped to this country from Germany, contains about 14 per cent. of potash. The cheapest source is to buy wood ashes at even twenty cents a bushel. Next comes kainite at about \$15 a ton. (Dealers in commercial fertilizers usually handle it). These should be sown in a light dressing about the trees in the fall and worked into the soil, then the fertilizer gets down to the roots by the time the trees start to grow in the spring. A little each year is better than a large quantity at once.

"Nitrogen comes from animal waste, guano, nitrate of soda, blood, cottonseed, etc. In case it exists in quantity it should not be composted, as the heat that would be generated in the compost heap would drive off a large per cent. of the nitrogen. Such had better be mixed with marsh muck, leaf mole or humus of some kind, and kept under cover. Apply this to the tree the same as the potash.

"Phosphate exists in the phosphate of lime, the bones of animals and the mineral phosphate rocks, which are the ancient marine animals. The last can be sown around the tree at any time and worked into the soil, as there is no waste to it. There is nothing better than barn-yard manure, but as that is made only in limited quantities and not enough to go around, the deficiency must be supplied from some other practical source. Your compost heap will be a complete manure, having all the elements of plant

growth. See that nothing goes to waste that will add to the value of the compost heap. Upon a farm of 160 acres there will be enough each year to keep a good-sized grove in fine condition. It is only the naturally poor land that requires to be fertilized; the valleys are always rich enough in their natural state for the tree to do its best, both in growth of wood and nuts. The thin, sandy soils require to be fertilized, and the tree appreciates such treatment, as you can readily see by the way it grows, also in the extra crop of nuts it will produce."

The selection of seed, or of nursery stock in case the grower chooses not to do his own planting, is obviously of importance. Some growers give it as their experience that the pecan will faithfully reproduce its kind, while others find seedlings unreliable, and resort to grafting; but all freely admit that the best results are only obtained by a system of careful selection. For seed purposes many growers of the large, plump, finely-flavored varieties get from one to ten cents apiece, and opinions are given, based on results, that some of the finer, so-called paper-shell nuts would be cheap at a dollar apiece.

Growers differ as to the time and methods of planting, the late Col. W. R. Stuart, of Ocean Springs, Miss., referred to as the "father of the pecan industry," recommending that planting be done in the winter, and that the planting be done in nursery rows, while others bury the nuts in loose, dry sand or under a shallow covering of soil during the winter, allowing them to slightly sprout before planting, and strongly recommend that they be planted where the tree is to remain. Some think that the nuts can be better protected from rats, squirrels, ants and other pests which are likely to attack the freshly-planted nut if the nursery plan is adopted, and if a fertile plat be selected, deeply plowed, with furrows four feet apart, four inches deep, nuts planted twelve inches apart and covered level, the trees will make a growth of eight to fifteen inches the first year and be ready for transplant-



ing the next year. Some report good success in transplanting at the ages of five or six years, he says, but he thinks the sooner the better, and says trees that are not set at the age of one year should have the top root cut fifteen to twenty-four inches below the surface of the ground. On this point there is a sharper disagreement among growers than on any other feature of the subject of pecan culture. Colonel Stuart declared that all the trees in his grove had their tap-roots cut, and he was sure it benefited them, "making them grow stronger and larger and awakening them to the necessity of a more thorough and vigorous rooting." Others declare the tap-root cannot be duplicated, and that cutting it retards the tree in bearing and makes it less prolific.

Granting the proposition that the pecan cannot be implicitly relied on to propagate its kind, or "come true," the question of budding or grafting is of importance to the grower who wants to be certain that his trees will produce what he has marked for and expects. Budding and grafting are said by some experts to be more difficult operations with nut-bearing trees than with ordinary fruit trees, as unless treated by skilful hands only a small proportionate number will live. Instructions regarding these processes are given in the Stuart Company's pamphlet, heretofore referred to. A successful method, known as "annular budding," is described as follows:

"Take a sharp knife, make two cuts completely around the stock about one inch apart; cut only just through the bark; make a straight slit through this bark between the two circles; now slip off this ring of bark and use it for a pattern to cut the ring of bark from the scion, which must have a well-developed bud in its centre; cut close to each end of the pattern; now split this second ring down as you did the first, slip it off from the scion, put it in the place of the ring taken from the stock, trim if necessary so that the fit will be perfect; now wrap with strips of waxed cloth all the wounded parts, but do not cover the bud; cover over well

the slit with wax, also tie two cords around, one above and one below the bud, over the waxed cloth just where the scion bark meets the stock bark. In case it is a success, the bud will show life in a few days, and after the shoot is out a few inches, cut the cords, also the top, from the tree a few inches above the bud; let no sprouts grow on the stock, as they may draw the support from the bud. After the bud has grown ten inches, cut the stock down to within one inch of the bud. Seedlings can be worked in this way after they are two years old up to five or six. The scion wood must be full as large as the stock; the bandage and wax must be well applied, so as to exclude the air perfectly from the wound. In case new bark does not form readily over the stock above the bud in two years, trim down a little with a sharp knife.

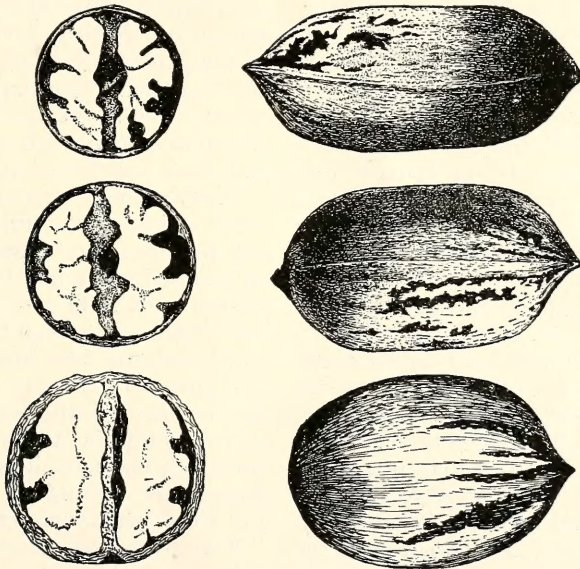
"Some use the tongue graft; it does very well for one-year-old stock. The mode is to cut the stock square off a little below the ground; place your knife down on one side of the stock, one and one-quarter inches from the end, draw upwards, have the knife come out almost the centre of the stock at its top; this takes off a wedge-shaped piece; now partly split, and cut a little across the grain from the top of the stock down so far as the piece is long that you shaved from the one side; thus you have a wedge-shaped tongue upon one side of the stock. Now prepare the scion in a similar manner, only cut clear across the scion, having the knife come out just at the inner edge of the bark at the end; split the scion in the centre, setting the knife back from the end in commencing; now insert the tongue of the scion into the cleft of the stock, being sure that the edges of the bark of all meet nicely upon one side; this makes it possible for a union of the scion with the stock at four different points. Wrap with twine to hold the parts well together; bring up the earth to near the top of the scion all around; no wax is needed. Scions should be cut when the buds are dormant, and stored away in a cool, moist place until used. Trees to be worked this way must be upon



high, dry ground, as standing water would be death to the scion at any time for the first six months after the grafting was first done. The old-fashioned cleft graft is fully as reliable as any; trees one inch in diameter are very favorable for that style of work. Saw off the stock just at the surface of the ground with a fine-tooth sharp saw; split the stock in the centre; now put a wedge in the cleft to hold the splits apart just the distance of the thickness of your scion when trimmed, wedge-shape at one end, ready to be inserted into the cleft of the stock, which needs to be done with great

limbs, of course, are preferable, as the bark is more pliable; also, has more sap which circulates very freely.

"The old-style way of propagating by budding, as we bud the peach, is a failure with the pecan. There is no question but what it richly pays anyone who contemplates putting out a pecan grove to do it with budded or grafted trees, even though you go very much more slowly, as it is not the number of trees that count so much as it is the good ones. Ten grafted or budded trees are of more value in starting a grove than one hundred of the best seedlings you can get. In the



VARIETIES OF CULTIVATED PECAN.

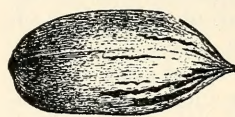
nicety. Where the scions are small enough so they will not crowd each other, it is best to put in two for each stock. Wrap a cord firmly around and tie; also use a liberal amount of wax upon the sides of the cleft; also open the top of the stock; in fact, cover all bare places well over, then bring up the earth to near the top of the scion, leaving one bud out. The limbs of the trees can be worked in a similar manner, with this difference: more wax must be used, and each scion must have a terminal bud, so as to prevent evaporation. The new growth of

one case you are certain that your trees will bear fine, large, soft-shell nuts (in case your scions were of that kind, which are the kind to secure by all means), while with seedlings you do not know what the nuts will be. It costs no more to care for a grove of choice trees than of poor ones; then again the grafted or budded ones come into profitable bearing three years earlier than the seedlings. Here is a case in point: Last November we paid in cash \$248 for the nuts which grew upon one tree, the crop of one year. The tree is twenty inches



through at its base and forty-five feet high. Such a size tree would grow in twenty or twenty-five years. Now, small nuts from the same size tree will sell for not more than \$15 or \$20. Another tree only ten years old bore

squares of not less than forty feet apart—in poorer lands a greater distance—and to dig holes not less than four feet deep by three feet wide. The usual care in transplanting any nursery tree is required for the pecan. It



COMMON WILD PECAN.

\$13.50 worth. These choice trees are such as we grow seedlings from. We sell a great many more seedlings than we do grafted or budded trees, simply because they are so much cheaper, and people in general do not realize that such a vast difference exists between the profits of the seedling and the grafted or budded; but such is the case and such it will always remain for aught that we can see.

"Those who contemplate establishing groves, and cannot afford to buy a sufficient number of trees with which to set it, can buy from one tree up to as many as they can, according to their desire and ability, of the very choicest variety, and a part of each succeeding year's growth of new wood can be trimmed off to graft or bud seedlings with. In so doing, you may be going a little slow, but you can have the satisfaction of knowing that you are on the right road, the one which leads to success; you are growing your own wood for grafting and may have some to sell, and it will sell at a good price, because it is scarce; it need not be long before you will get back all your trees cost you, as it is a very profitable business raising the trees just for the grafting wood alone. We appreciate this condition perfectly, inasmuch as we never have been able to get all the grafting wood which we want to use in grafting and budding our seedlings."

Having reached a decision regarding the better method of beginning a pecan grove, the grower who decides to use a nursery-grown tree is advised to have his well-selected ground thoroughly prepared and laid off in

is regarded as important to spread out the lateral roots, place plenty of fertilizer around the tree, cover up well and burn the ground around the roots and on top and strew some loose dirt. All around the tree place a mulch of dead leaves. According to the Florida expert, it is desirable to protect the young tree from the western sun by placing a board on its western side.

Orchard trees, grapevines and many other crops, even corn, cotton, beans and potatoes, are suggested and recommended to be planted in the pecan groves for the first ten years or less. It is desirable to keep the ground well cultivated and free from weeds, without, however, drawing too much upon the fertility of the soil immediately surrounding the trees. As the trees approach maturity it is conceded that the ground should be sown in grass and thus left permanently.

The processes of nature seem to suggest methods for harvesting the nuts, the hulls opening with the frosts of autumn and the nuts falling to the ground. A common method of assisting this process is to shake the trees, or to thresh them with long poles.

Dealers who make the most of their opportunities select for seed the most desirable nuts, and assort the remainder, so as to receive the advanced price always obtainable for the better quality of nuts.

The industry of preparing the meat of pecans for market, free from shells, is assuming considerable proportions. One manufacturer recently in one year sold as many as 100,000 pounds of the kernels. As the process of turning out



the meat free from the shells is performed by machinery, confectioners are every year increasing the uses to which they put the pecan nut.

As a marketable commodity the nuts of the pecan have many advantages over all fruits. No delicate care is needed in gathering them and putting them up for the market. Delay in transportation does not injure them, unless through undue exposure to heat or damp. They can be shipped any distance and in any month of the year, and there is a large and increasing demand for them everywhere and at all seasons.

A most comprehensive treatise on the enemies of the pecan is embraced in an article published in the New Orleans Times-Democrat some time since. As it describes all the pests known to any section of the country where the pecan is grown, and also suggests remedies, it is a valuable addendum to the literature on the subject of pecan raising.

"The fall web worm, or pecan caterpillar, is one of the most destructive insects the pecan grower has to contend with either in Louisiana or Mississippi.

"Some ignorant persons argue that it does no harm by defoliating the young tree, but it is a well-known fact that if any plant be defoliated, the succeeding crop of fruit will be greatly injured, and the growth damaged for some time to come. Hence the necessity of destroying every insect that preys upon the leaves, besides all mosses and lichens that may interfere with their development.

"There are at least two practical methods of destroying the pecan caterpillar: first, by burning off the nests. The best device for this purpose is a piece of asbestos packing, wired to a stiff iron rod and fastened to a long, light pole (a bamboo fishing-pole answers the purpose admirably). By dipping the asbestos in coal oil or crude petroleum one may burn off eight or ten nests without redipping. The asbestos will last for an indefinite time, as it is incombustible. Where the trees are

so tall that they cannot be reached with a pole, spraying must be resorted to. For this purpose any arsenical preparation will answer, but the safest and most economical one is made from Paris green.

"Caution must be used not to make the solution too strong, or it will burn the leaves. One-quarter pound to fifty gallons of water, which must be kept well stirred during the process so that it may be distributed evenly over every portion of the leaves and branches.

"The following is a description of various insect pests:

"The caterpillar is the larva of a small moth or miller spotted more or less with black or brown. The eggs are laid on the leaves early in the spring and a week or so later the worms are hatched to work well through the season, unless destroyed as suggested.

"Another insect found working on the pecan and hickory east of the Mississippi river is a small borer that cuts through the bark of the main trunk and digs a tunnel directly into the wood, ranging upward. It is about half an inch in length and looks a little like the borer found in peach trees, except that its head is not so broad and flat.

"The parent is a black beetle, spotted and marked more or less with bright yellow; length about three-fourths of an inch; long feelers come out from either side of the head, turning backward. Scientific name, *Cyllenepicta*.

"The beetle deposits its eggs upon the outer bark of the tree early in the spring, and a week or so thereafter finds the young borers hatched and cutting inward. By the fall the transformations of the insects have been passed, leaving the perfect beetles to hibernate through the winter and be ready for starting a new brood on the opening of the next spring.

"The remedy recommended for this pest is to give the trunk a thorough spraying with an arsenical solution early in the spring. This will effectually destroy the young borers ere they



have more than started into the bark, for they eat their way in and hence could not avoid getting a dose of the poison.

"The third insect that works upon the pecan, hickory, persimmon and other trees is a twig girdler, known to entomologists as *Oncideres Cingulatus*. It is a grayish-brown beetle about three-fourths of an inch in length, armed with long feelers, somewhat like those of the beetles that produce most of the tree-borers, though the feelers (antennae) extend more to the front than those of the borer beetles. It has a snout or bill which turns downward at right angles with its body. This mischievous insect, selecting a twig, proceeds to pierce it, and deposits eggs therein. These eggs hatch little grubs, which work along the pith of the twigs; but it is necessary for them to come out and go into the ground before they can pass through their transformations and become perfect beetles like the parent. But the parent has made provisions to favor all this. After depositing her eggs in the twig, she descends a few inches, and, with her bill, begins girdling it round and round, until almost cut off, just wood enough being left to enable it to hang on for a short time, some of them remaining attached to the tree until the fall winds come and break off the twig at the point girdled. It drops to the earth, and the grubs come out, dig into the soil and undergo their transformation. The only damage done by this insect is to prune the tree, and sometimes it prunes where we would rather that no pruning had been done. It seems to do more damage to the common persimmon than either the hickory or pecan. Gathering the branches already fallen, also removing those attached to the tree and burning, will destroy many of the young grubs.

"The pecan has no disease that we know of. On several occasions we have heard of twig blight, and more than once we have traveled a considerable distance to investigate it. Invariably we found it springing from

the same cause, swampy or boggy land. While occasional overflows of streams do not at all injure the pecan, but rather help it, permanently swampy or soggy locations are against it. The trouble shows first upon the slender twigs, and then we hear of pecan blight.

"Immediate and thorough drainage is the remedy in all such cases. Cut deep ditches to the grove, lead off the water standing in the soil, and subsoil and the trees will promptly recover.

"The Times-Democrat may here refer to another pest which is very destructive to the pecan in Southern Louisiana, and which infests large trees to the extent that it not only renders them practically worthless for fruiting purposes, but eventually kills the tree. This is the well-known Spanish moss.

"Chemical analysis shows this to be a true parasite, and not an air-plant, as supposed by many.

"The remedy for all trees, including the pecan, which may become infested with either moss or lichens, is to spray thoroughly with any strong alkaline wash."

In keeping with the importance of the industry and the standing of the experts whose opinions are at hand, the "Southern States" publishes as follows, letters recently received covering the points of interest in the culture of the pecan:

Mr. T. V. Munson, of Denison, Texas, who has given much attention to the facts concerning pecan raising, and who has collected and tested the finest nuts from various sources and has for years grown trees from the best kinds in nursery for sale, gives the results of his investigations in the following letter to the "Southern States:"

"The largest pecan orchard in the world is that of F. A. Swinden, of Brownwood, Texas, which contains 400 acres, set with 11,000 pecan trees at forty feet apart each way. The trees range in age from two to seven years, transplanted, grown from nuts of several of the best varieties yet



found, such as the Stuart, Van De-man, Swinden, etc. Such varieties are yet scarce even for planting, and for that purpose command a price of fifty cents to \$1 per pound, while the common kinds generally gathered in the woods can be bought for five to ten cents per pound. There are other splendid varieties, such as the Risien, Gonzales, Pearl, Jumbo, etc., but these are yet confined to isolated, rare, wild trees found in various parts of Texas, and young trees grown from them not yet in bearing.

"The typical soil for the pecan is a deep, dark, alluvial, well-drained soil, such as is found in creek and river bottoms, that rarely overflow, that are suitable for general farming. Low, swampy and poor lands are unsuitable. The nuts should be secured from isolated trees, where the pollen of inferior kinds does not prevent the parent tree from reproducing its kind. They should be planted in rich loamy soil, in nursery rows, in the fall, and covered two or three inches deep. The land should be free from moles, mice and especially pocket-gophers, which are very fond of both the nuts and the roots of the trees and are very destructive to them.

"At one year in nursery set the trees in permanent orchard, twenty-five feet apart each way, with stake to mark position of each and to protect from plowmen. Cultivate the land in cotton, potatoes, melons or any other low-growing crop, and keep the ground clean about the trees. A good stand can be more certainly secured in this way than by planting nuts where the trees are permanently wanted, as weeds, gophers, mice, etc., destroy the nuts and young trees before they show themselves much above ground.

"In six to eight years the trees will begin bearing. Generally, trees that have been transplanted will bear earlier than those growing permanently where planted, thus following the general law as observed among fruit trees. After a tree has borne once or twice the character of nuts that it will always bear is known. If not as fine

as desired, at the next spring, just before buds swell, top-graft to the very finest nuts borne by any in the plantation or that can be procured. At present, no stock of grafted fine kinds is in existence of any consequence; hence this advice. Trees can be procured of a few reliable parties who grow for sale from the best nuts to be had.

"At ten to twelve years the trees bear from one-half to two bushels each and at that amount are profitable, as the price of fine nuts for confectioners, etc., will be from fifteen to twenty-five cents per pound. That would be \$3 to \$12 per tree. After that, the orchard will be good for many generations and more and more profitable with age.

"At fifteen years of age, every alternate tree should be grubbed out, as crowding would then begin, and the permanent trees would be left fifty feet apart each way. The trees grubbed out will be profitable as nut-bearers for at least ten years, and the wood is very valuable for fuel and all kinds of tool handles.

"The land can be cropped in low farm crop for ten to twelve years after planting, after which it should go into permanent pasture. The land under the trees should be raked off clean each fall when nuts first begin to fall, and all live stock removed from the orchards, and then the gathering can best be done by children at a few cents per bushel, going over once every three to six days, according to rapidity of ripening, until crop is all down.

"After gathering, the nuts should be spread on floors under sheds, or in barns, until fully cured; then should be entirely cleared of hulls and assorted into grades by running through a graduated sorter, composed of wire screens. Then the nuts are run through a polishing machine, and put up in boxes of different weights, with grade marked thereon, and then marketed by samples, put up in small mailing boxes.

"Only those having abundant capital and suitable land could afford to establish a pecan orchard of many



acres, but every family, with a good roomy yard, of good soil, might enjoy the luxury of one or more trees. They make a splendid shade-tree and give the children infinite fun.

"The most disagreeable feature of the pecan tree as a shade-tree is that the tent-caterpillar is very fond of it, and makes it unsightly by nesting at the extremities of the branches. These nests are quickly dislodged by twisting into them the extremity of a long pole having some nails driven partially into it near the end to take hold of the web of the caterpillars. The nests with caterpillars in them are pulled down and held over a flame a few moments. Or a wad of raw cotton can be tied to the end of the pole, saturated with coal oil, lighted, and held a few moments under each nest, which will quickly destroy them and their contents without damage to the trees, if in careful hands.

"As to theories concerning injurious effects of cutting the tap-root of pecan trees, they are purely theories and nothing more. Often in the nursery-rows I have seen trees that had their tap-roots eaten quite away by pocket-gophers, that would send down several perpendicular roots, and become more vigorous than ever. Such trees transplant more readily than those with single tap-roots, and do equally as well or better permanently. The tree is in its nature prepared to overcome such accidents."

One of the most spirited opponents of tap-root cutting is Hon. Arthur Brown, of Florida, quoted in the foregoing pages. On this subject he says:

"I know that some do not agree with me regarding the 'tap-root,' and with them I agree to disagree, for I know that many do agree with me that the cutting of the tap-root injures the tree in so far as to lessen the chances of a heavy yield of nuts and prolongs the date of bearing; therefore I am content to continue in this same belief which I have maintained for so many years.

"If it is concluded to plant trees instead of seed, select only those trees from one to two years old, giving

choice to the one-year-old, having good tap-roots, with healthy lateral roots. The well-known fact of shortening the root to produce earlier bearing is all very well for some trees and plants, but will not answer for the pecan tree, at least experience so teaches me, and I am not alone in that belief, and quote the following from an article on pecan culture in St. Andrew's Buoy, which says: 'Thousands of pecan trees have been transplanted from nurseries the past few years, the nurserymen cutting off the tap-root, not thinking or knowing that they have destroyed the life of the tree as to its bearing value. They will grow and make beautiful shade trees and that is all. I am well aware that some differ with me, but our most experienced pecan growers say never cut the tap-root of a pecan tree.'

"In this I agree, and believe the many who may differ will eventually regret doing so. The successful gardener will pinch off the roots of the cabbage plant before transplanting to make the plant 'head low' and thus avoid the long neck and small head, and so if we cut off the tap-root of the pecan we are aiming to have a beautiful round-headed tree that may never bear a nut, and if it bears at all the bearing age will be very slow coming and the yield very small at the best. The peach and pear tree soon give returns in fruit, and all inferior trees can be replaced and the planter rewarded for his labor; but not so with the pecan—it takes from fifteen to twenty years to have a tree that will bear in paying quantities, and if a mistake is made at time of planting, too many years must roll around probably before this mistake is discovered and too late to rectify the mistake; so all is lost from not starting right. Whether the planter believes that the tap-root should be or should not be cut before transplanting ought not hinder the planter in the least, for as it is no more trouble to plant the tree with the tap-root uncut than cut, why not take the safe side and plant with tap-root uncut? You are most certainly then on



the safe side. In my opinion, a one-year-old tree, with tap-root entire, is the age and kind to transplant. I do not say plant the nut in preference to the tree, for a one-year-old tree, with good tap-root, properly planted, will do just as well and be as sure of producing a bearing tree as one from the nut. In many sections, rats, squirrels, crows, etc., are very destructive, and many nuts are lost by their digging them up. The planter must choose for himself, and, of course, take all chances regarding the rats, etc., digging up the nuts, and not lay the blame all on 'bad nuts.' I have tried many ways to prevent this depredation of the rats and squirrels, but failed in all.

"If nuts be preferred, then by all means plant them where you wish the tree to stand and thus save much trouble. In grove form, pecan trees should stand not less than forty feet square, and will take twenty-seven trees per acre at that distance; but I will add that some of my trees nearly seventy years old overlap their limbs at sixty-five feet apart."

The opinions of Mr. Herbert Post, of Fort Worth, Texas, are contained in the following letter to the "Southern States":

"Being of the same family as the hickory and black walnut, the pecan can be grown profitably wherever they grow, which means every State in the Union. Probably there is no tree so valuable in the United States, of a wild growth, that can be domesticated with so much success and profit as the Texas thin-shell pecan. Responding generously to cultivation, they will bear at six years of age and with profit at eight years.

"A man living near here brought in some new pecans last week, and says he gathered two and one-half bushels from a tree but three years old. This tree had been irrigated, however. This is a wonderful yield, much better than usual, but this fact shows what they are capable of doing when given intelligent culture.

"First, I will speak of what has been long in dispute regarding the trans-

planting of pecan trees and cutting of the tap-root. Unknowingly, and without intention to deceive, nurserymen have cut the tap-root of the pecan, and told their customers that it made no difference as to their bearing—they will transplant as well as any other tree; but everyone can be assured that when the tap-root is cut it will never grow another, and the bearing qualities of the tree are destroyed. Thousands of trees have thus been treated the past few years, which will bring disappointment to the grower. Some have written me that I am mistaken, as they have found new tap-roots growing after the original had been cut. They are only brace-roots, or new feeders. The tips of the tap-root have offices to perform in the growth of the tree which can be supplied in no other way if the tap-root has been cut, and it is a waste of time and money to transplant a pecan tree if the roots have been cut. Our best growers all say, don't cut the tap-root, and everyone will find they are right. It is foolish after such costly experiments by others to continue the practice of cutting the tap-root, and I advise everyone to demand whole and uncut roots of the pecan tree, or refuse them. The pecan is a rapid grower in the ground. When the young tree is only eight inches above ground the tap-root has gone down two and one-half feet.

"The cost of planting the best Texas thin-shell pecans will not exceed \$3 per acre; the care of them until they come into bearing is almost nothing. Cultivating the same ground on which they are planted soon pays all expenses and helps wonderfully the growth of the trees.

"It has been recommended, heretofore, as best to plant the nuts where the trees are to stand. So many complaints have been made of losses by squirrels, moles and rats in the field that some other and better plan must be adopted. The following has been found the cheapest, safest and best plan for planting the pecan. Throw up a bed in your garden or enclosure near your house to the height of three



to four feet, placing at the sides either rails or plank to keep it from caving. Plant your pecan nuts in rows twelve inches apart and six inches in the row. Within twelve months you can transplant with safety, with roots whole and unbroken in this way. Where the trees are to remain permanently, take a post-hole auger and dig, say, a foot deeper than the length of the roots. When ready to transplant, remove the side of the bed next the outside row and take away the earth to full length of roots. Remove all the roots to the place prepared. Put them in carefully and fill with earth, well filled around the roots, and your work is done and you have started a foundation for wealth for your family and theirs for generations to come, giving you an annual income, at small cost, for planting and care.

"Every year as your grove approaches bearing, the value of your land increases. English walnut lands in California sell from \$800 to \$1200 per acre, and not long ago sixty acres sold at \$1300 per acre. Pecan groves will become equally valuable, paying large income on such valuations.

Dr. Chas. Mohr, a well-known botanist and grower, of Mobile, Ala., who has written a number of papers on pecan culture, giving the results of his very extensive observation and experience, the first read before the Mississippi Valley Fruit Growers' Association, held in New Orleans in 1883, and published in the reports of the association, and another before the American Forestry Congress at Philadelphia in 1889 (republished, with additions, in *Garden and Forest*, Vol. 2, p. 569, Nov., 1889), sends a brief outline of his opinions as follows:

"To obtain fruit at the earliest it is best to plant the seed on the spot where the trees are to remain. Seed selected for planting (best quality, of course) should be put away, buried in sand, until the latter part of winter or dawn of spring, when they should be planted in well-prepared ground, enriched by well-rotted manure and decomposed vegetable matter.

"If planted in a bed, the seedlings can be transplanted best after the first season, late in the fall. Care must be taken not to injure the tap-root and to preserve intact the fine lateral root-lets.

"A light sandy loam, with a subsoil retentive of moisture, should be selected to obtain best results.

"After seeing that the plants become firmly established, no other attention is necessary beyond occasional mulching with litter. A moderate application of bonedust in the spring and of liquid manure slop from the kitchen, etc., will greatly hasten the growth.

"Trees should be planted not less than fifty feet apart each way, and sixty feet is better.

"Seeds do not always prove true to the superior qualities of the parent stock; hence grafting is often resorted to. Cultivators find the surest method in grafting the seedling above the neck of the root when not over two years old.

"The trees begin to bear about eight or ten years from the seed. Profitable returns may be expected after they have reached the age of fifteen to twenty years. It can be said that under normal conditions trees will continue to flourish luxuriantly for generations. The attacks of the hickory borers, their larvae burrowing into the limbs of trees of full growth, are, however, causing not rarely considerable injury and premature death. Another insect enemy is the tent caterpillar, the webs of which should be destroyed before the sun is fairly up, as soon as they make their appearance.

"The number of pecan groves of small extent is increasing in this section with every year."

Mr. O. D. Faust, of Bamberg, S. C., sends to the "Southern States his views on pecan raising, as follows:

"The pecan, which grows naturally over a large portion of the United States, and is indigenous along the Mississippi river as far north as Illinois, is the most important of our native nuts, and has assumed considerable importance as an industry in the



South. It is remarkable as the most profitable of all our nut-bearing trees. No man can leave a surer legacy for his family than a good pecan grove. My experience is that for a permanent annual income, at small cost for starting and permanently enhancing the value of the land, nothing excels the pecan.

"There are many varieties of the pecan, and it is of great importance in securing trees or nuts to get the best varieties. The pecan will do well wherever the hickory is found; it resembles very much the latter; it is very tough and hardy, and its long tap-root seems to render it independent of the seasons.

"A deep alluvial soil is what the pecan needs, as it is found naturally in its most flourishing state in rich bottom lands. The young trees commence to fruit at seven or eight years, and continue to increase their stock every year. They constitute as handsome and efficient shade-tree as any other, and seldom blow down.

"Here is an opening for those who own only a few acres of land to plant trees that will, in a few years, enable them to supply an ever-increasing demand. There is no danger of oversupplying the market. There are too many doubting Thomases in every community to be any danger of planting too many trees, and only the more progressive men will plant pecans and reap the reward.

"There will always be a ready demand for the nuts, as few will embark in an enterprise that it takes so long, they say, to come in. There will never be an over-supply; the markets of the world are open to us. Europe hardly knows what the pecan is; England, France, Germany, Spain and Italy have never seen our fine pecans, so that the demand will always be great and the prices high.

"Almost any crop can be grown on the land until the trees pay enough to give the land up to them, and then can be sown to pasture.

"Some claim that transplanted trees will not bear; this I think misleading,

as most of my trees are transplanted, and I see no difference in the bearing qualities. They can be safely transplanted one to two years old without cutting the tap-root. Some maintain that the transplanting of the pecan, while young, is advantageous, inasmuch as it causes it to make a more spreading head and to come earlier into bearing.

"The tendency of the pecan to produce varieties is amply proved by the numberless kinds we have. The best way to propagate a certain kind is by grafting or budding. Either is much more difficult than the grafting of fruit trees. Grafted trees come earlier into bearing than seedlings, besides perpetuating the improved kinds. My trees at ten years old bore thirty pounds of nuts, and at fifteen years the yield was doubled, or more than \$200 per acre; but assuming the product is but half that, what other crop offers so great and so reliable a profit? An old gentleman five miles from my place has two trees, from which he sells \$45 to \$50 worth of nuts. Think of what a grove of such trees would pay! It is better than life insurance or a bank account. Indeed, in Louisiana the pecan industry is run as insurance.

"On good land they should be set 50x50 feet; on ordinary land, 42x42 feet will do. My trees are 35x35 feet, and I find they are too close. They should be set out at one year old, on account of their long tap-root. Fertilize well every year. It will be beneficial to mulch the young trees with top earth, stable manure or any well-rotted compost, which keeps the ground cool and prevents baking by the summer sun. They have this protection in the forest, and we should learn this lesson from nature. I would advise the progressive young man to commence now and put out a grove of the best paying and most reliable of all trees, the pecan.

"When the old man with wintry locks was asked why he planted trees which he could never see mature, he replied, that some one planted trees for him, and he would plant for grati-



tude that posterity might reap the reward. Benefactors are of many classes, but it is doubtful if anyone more generally benefits the world than the tree planter."

The views and experience of Mr. John J. Delchamps, of Mobile, Ala., are outlined in the following extracts from a letter to the "Southern States:"

"Were I a younger man and wished to make a pecan grove I should, in the fall or early winter, select good-sized thin-shell nuts; these I would stratify in some safe garden corner and have covered with an inch or two of soil exposed to the weather. In February, these nuts, being swollen or sprouting, I would plant out where the trees were destined to stand permanently. At a year or two old, the young trees might be grafted or budded. Cleft-grafting at the collar I have found an easy process; ring or annular budding is the favorite process in Europe with nut trees. Selection of abnormally large nuts for seed I would avoid, because my experience and observation show that when the highest degree of improvement has been reached there is a great tendency to sport back, while seed, having attained a fairly satisfactory condition, is more likely to hold its own or make further progress for good.

"I have known a few instances, not over half a dozen well authenticated, of pecan trees fruiting at five years of age; a good many at six and seven.

All those were seedlings that had never been transplanted or when yearlings. Trees that had been root-pruned, scientifically or otherwise, or transplanted when several years old, I have never known to make good, satisfactory growth, or to come into early bearing. A very young tree, one or two years old, may be safely risked, for although the tap-root will be cut or shortened more or less it will throw out new ones, probably two or three, which I accept as conclusive evidence that nature demands it.

"The trees should be not less than fifty feet, if seed is put where the trees are to grow, or even if yearlings are so planted; if large ones are transplanted, which will seldom, if ever, develop into large, healthy and symmetrical ones, thirty feet will do.

"The pecan, like all its congeners of the *carya* family, adapts itself to a great variety of soils and conditions. It succeeds best on alluvial lands, not too dry nor too wet. Manure or other fertilizer it does not seem to need or call for urgently; oyster shells, bone-dust, may be suggested as probably very good and productive of heavy yield. For a few years, the orchard may well be utilized for planting potatoes, cabbage, turnips or other like truck. After a few years, the grove can be utilized as a pasture for small cattle, and when the trees have attained a size putting them beyond risk of injury for larger ones."

## THE CAUSE AND PREVENTION OF PEAR BLIGHT.

The growers of pears in the Gulf States have lost millions of dollars in the last few years by the ravages of the mysterious malady known as blight. Until the orchards were attacked by blight, the growing of Le Conte and Keiffer pears in South Georgia, Western Florida, South Alabama and elsewhere in the Gulf coast region was one of the most certain and profitable of agricultural pursuits. Horticulturists have been wholly at sea as to the cause and cure of this disease. Investigation and experiments have failed to disclose the origin of it or discover a remedy for it. It is said now, however, that the Agricultural Department at Washington, after the most careful and thorough investigation, extending over a period of several years, has finally discovered the cause of the disease and has found that it can be prevented and cured.

The following article on the subject is one of the most important and valuable of recent contributions to horticultural literature. It is taken from the recently published "Yearbook of the United States Department of Agriculture" for 1895, and was written by M. B. Waite, of the Division of Vegetable Physiology and Pathology:

"There is probably no disease of fruit trees so thoroughly destructive as pear blight, or fire blight, which attacks pears, apples and other pomaceous fruits. Some diseases may be more regular in their annual appearance, and more persistent in their attacks on the fruits mentioned, but when it does appear pear blight heads the list of disastrous maladies. Again, no disease has so completely baffled all attempts to find a satisfactory remedy, and, notwithstanding the great progress made within the last ten years in the treatment of plant diseases by spraying and otherwise, pear blight

has until recently continued its depredations unchecked. It is now known, however, that the disease can be checked by simply cutting out the affected parts. This was one of the first methods tried in endeavoring to combat the disease, but came to be generally regarded as worthless. The remedy which will be discussed in this paper is, in a general way, so similar to the old one that at first it may be difficult to see that anything new has been discovered. In the process now proposed, however, there are three vital improvements, namely, the thoroughness and completeness with which the work is carried out, the time when the cutting should be done, and a thorough knowledge of the disease so as to know how to cut.

"The method of holding the blight in check was discovered through a careful scientific investigation of the life history of the microbe which causes it. The investigations were carried on in the field and laboratory, and extended over several years. In the short account which follows no attempt will be made to enter into the details of the work, nor to introduce all the evidence to prove the various statements, but simply to give such points as will enable the reader to intelligently carry out the method advocated.

### WHAT IS PEAR BLIGHT?

"Pear blight may be defined as a contagious bacterial disease of the pear and allied fruit trees. It attacks and rapidly kills the blossoms, young fruits and new twig growth, and runs down in the living bark to the larger limbs and thence to the trunk. While the bacteria themselves rarely kill the leaves, at most only occasionally attacking the stems and midribs of the youngest ones, all the foliage on the blighted branches must of course even-



tually die. The leaves usually succumb in from one to two weeks after the branch on which they grow is killed, but remain attached, and are the most striking and prominent feature of the disease.

"The most important parts of the tree killed by the blight are the inner bark and cambium layer of the limbs and trunk. Of course, when the bark of a limb is killed, the whole limb soon dies, but where the limb is simply girdled by the disease, it may send out leaves again the next season and then die. All parts of the tree below the point reached by the blight are healthy, no more injury resulting to the unaffected parts of the tree than if the blighted parts had been killed by fire or girdling.

"Blight varies greatly in severity and in the manner in which it attacks the tree. Sometimes it attacks only the blossom clusters, or perhaps only the young tips of the growing twigs; sometimes it runs down on the main branches and trunk, and again it extends down only a few inches from the point of attack. The sudden collapse of the foliage on blighted branches has led many to believe that the disease progresses more rapidly than it really does. It rarely extends farther than two or three inches from the point of attack in one day, but occasionally reaches as much as one foot.

"It is an easy matter to determine when the disease has expended itself on any limb or tree. When it is still progressing, the discolored, blighted portion blends off gradually into the normal bark, but when it has stopped there is a sharp line of demarcation between the diseased and healthy portions.

#### CAUSE OF THE DISEASE.

"Pear blight is caused by a very minute microbe of the class bacteria. This microbe was discovered by Prof. T. J. Burrill, in 1879, and is known to science as *Bacillus amylovorus*. The following are the principal proofs that it causes the disease: (1) The microbes are found in immense numbers in freshly blighted twigs; (2) they can be taken from an affected tree and culti-

vated in pure cultures, and in this way can be kept for months at a time; (3) by inoculating a suitable healthy tree with these cultures the disease is produced; (4) in a tree so inoculated the microbes are again found in abundance.

#### LIFE HISTORY OF THE MICROBE.

"Blight first appears in spring on the blossoms. About the time the tree is going out of blossom certain flower clusters turn black and dry up as if killed by frost. This blighting of blossoms, or blossom blight, as it is called, is one of the most serious features of pear blight. One of the most remarkable things about this disease is the rapidity with which it spreads through an orchard at blooming time. This peculiarity has thrown much light on the way the microbes travel about, which they do quite readily, notwithstanding the fact that they are surrounded and held together and to the tree by sticky and gummy substances. They are able to live and multiply in the nectar of the blossoms, from whence they are carried away by bees and other insects, which visit the blossoms in great numbers for the honey and pollen. If a few very early blossoms are affected, the insects will scatter the disease from flower to flower and from tree to tree until it becomes an epidemic in the orchard. We shall see later how the first blossoms are infected. From the blossoms the disease may extend downward into the branches or run in from lateral fruit spurs so as to do a large amount of damage by girdling the limbs. Another way in which the blight gains entrance is through the tips of growing shoots. In the nursery, when trees are not flowering, this is the usual mode of infection. This is often called twig blight, a good term to distinguish it from blossom blight, provided it is understood that they are simply different modes of attack of the same disease.

#### CONDITIONS AFFECTING THE DISEASE.

"The severity of the attacks, that is, the distance which the blight extends down the branches, depends on a num-



ber of different conditions, some of which are under the control of the grower. It is well known, however, that the pear and quince are usually attacked oftener than the apple. Some varieties of pears, like Duchess and Keiffer, resist the disease much better than others, such as Bartlett and Clapps Favorite. It may be stated in a general way that the trees most severely injured by blight are those which are healthy, vigorous, well cultivated and well fed, or, in other words, those that are making rapid growth of new, soft tissues. Climatic conditions greatly influence the disease, warm and moist weather, with frequent showers, favoring it; dry, cool and sunny weather hindering it, and very dry weather soon checking it entirely.

"The pear-blight microbe is a very delicate organism and cannot withstand drying for any length of time. In the blighted twigs exposed to ordinary weather it dries out in a week or two and dies. It causes the greater part of the damage in the month or two following blossom time, but twig blight may be prevalent at any time through the summer when new growth is coming out. In the nursery, severe attacks often occur through the summer. In the majority of cases, however, the disease stops by the close of the growing season. At that time the line of separation between the live and dead wood is quite marked, and probably not one case in several hundred would be found where the diseased wood blends off into the healthy parts and the blight is still in active progress. In the old, dried bark, where the disease has stopped, the microbes have all died and disappeared.

"It has been claimed that the blight microbe lives over winter in the soil, and for a long time the writer supposed this to be the case, but after careful investigation the idea was abandoned, for in no instance could it be found there. Unless the microbes keep on multiplying and extending in the trees, they soon die out. This is a very important point, but it affords opportunity to strike the enemy at a disadvantage. In certain cases the blight

keeps up a sort of slow battle with the trees through the summer, so that at the close of the season, when the tree goes into a dormant condition, active blight is still at work in it. This is also true of late summer and autumn infections. In these cases the blight usually continues through the winter. The germs keep alive along the advancing margin of the blighted area, and although their development is very slow, it is continuous. Probably the individual microbes live longer in winter. At any rate, the infected bark retains its moisture longer, and generally the dead bark contains living microbes during a much longer period than it does in summer. It has already been found that this microbe stands the cold well. Even when grown in broth in a warm room they may be frozen or placed in a temperature of 0° F. and not suffer.

"When root pressure begins in early spring the trees are gorged with sap. Under these favorable conditions the microbes which have lived over winter start anew and extend into new bark. The new blight which has developed in winter and spring is easily recognized by the moist and fresh appearance of the blighted bark, as contrasted with the old, dead and dry bark of the previous summer. The warm and moist weather which usually brings out the blossoms is particularly favorable to the development of the disease. At this time it spreads rapidly, and the gum is exuded copiously from various points in the bark and runs down the tree in a long line. Bees, wasps and flies are attracted to this gum, and undoubtedly carry the microbes to the blossoms. From these first flowers it is carried to others, and so on till the blossoms are all killed or until the close of the blooming period. Even after the blooming period it is almost certain that insects accidentally carry the blight to the young tips and so are instrumental in causing twig blight also. The key to the whole situation is found in those cases of active blight (comparatively few) which hold over winter. If they can be found and de-



stroyed, the pear-blight question will be solved, for the reason that without the microbes there can be no blight, no matter how favorable the conditions may be for it; to use a common expression, there will be none left for seed.

#### TREATMENT FOR PEAR BLIGHT.

"The treatment for pear blight may be classed under two general heads: (1) Methods which aim to put the tree in a condition to resist blight or to render it less liable to the disease; and (2) methods for exterminating the microbe itself, which is of first importance, for if carried out fully there can be no blight. The methods under the first head must unfortunately be directed more or less to checking the growth of the tree, and therefore are undesirable except in cases where it is thought that the blight will eventually get beyond control in the orchard. Under the head of cultural methods which favor or hinder pear blight, as the case may be, the following are the most important:

"Pruning.—Pruning in winter time, or when the tree is dormant, tends to make it grow and form a great deal of new wood, and on that account it favors pear blight. Withholding the pruning knife, therefore, may not otherwise be best for the tree, but it will reduce to some extent its tendency to blight.

"Fertilizing.—The better a tree is fed the worse it will fare when attacked by blight. Trees highly manured with barnyard manures and other nitrogenous fertilizers are especially liable to the disease. Over-stimulation with fertilizers is to be avoided, especially if the soil is already well supplied.

"Cultivation.—The same remarks apply here as in the case of fertilizing. A well-cultivated tree is more inclined to blight than one growing on sod or untilled land, although the latter often do blight badly. Generally good tillage every year is necessary for the full development of the pear and quince trees, and is more or less so for the apple in many parts of the country, but the thrift that makes a tree bear good fruit also makes it susceptible to

blight. Check the tree by withholding tillage, so that it makes a short growth and bears small fruit, and it will be in a better condition to withstand the blight than it would were it cultivated. In cases where thrifty orchards are attacked by blight and threatened with destruction, it may often be desirable to plow them once in the spring and harrow soon after the plowing, to plow them only, or to entirely withhold cultivation for a year, mowing the weeds and grass or pasturing with sheep. A good way is to plow the middle of the space between the rows, leaving half the ground untouched.

"Irrigation.—In irrigated orchards the grower has the advantage of having control of the water supply. When such orchards are attacked, the proper thing to do is to withhold the water supply or reduce it to the minimum. Only enough should be supplied to keep the leaves green and the wood from shriveling.

"Extermination of the Blight Microbe.—We now come to the only really satisfactory method of controlling pear blight—that is, exterminating the microbe, which causes it, by cutting out and burning every particle of blight when the trees are dormant. Not a single case of active blight should be allowed to survive the winter in the orchard or within a half mile or so from it. Every tree of the pome family, including the apple, pear, quince, Siberian crab apple, wild crab apple, the mountain ash, service berry, and all the species of *Cratægus*, or hawthorns, should be examined for this purpose, the blight being the same in all. The orchardist should not stop short of absolute destruction of every case, for a few overlooked may go a long way toward undoing all his work. Cutting out the blight may be done at any time in the winter or spring up to the period when growth begins. The best time, however, is undoubtedly in the fall, when the foliage is still on the trees and the contrast between that on the blighted and that on the healthy limbs is so great that it is an easy matter to find all the blight. It is important to cut out blight when-

ever it is found, even in the growing season. At that time of year, however, it cannot be hoped to make much headway against the disease, as new cases constantly occur which are not sufficiently developed to be seen when the cutting is done. In orchards where there are only a few trees, and the owner has sufficient time to go over them daily, he will be able to save some which would otherwise be lost. However, when the trees stop forming new wood, the campaign should begin in earnest.

"Of course, the greater part of the blight can be taken out the first time the trees are gone over. If this be in midsummer, the trees should all be again carefully inspected in the autumn, just before the leaves shed, so as to get every case that can be seen at that time. After this a careful watch should be kept on the trees, and at least one more careful inspection given in spring before the blossoms open. It would doubtless be well to look the trees over several times during the winter to be certain that the blight is completely exterminated. In order to

do the inspecting thoroughly, it is necessary to go from tree to tree down the row, or, in the case of large trees, to walk up one side of the row and down the other, as in simply walking through the orchard it is impossible to be certain that every case of blight has been cut out.

"The above line of treatment will be even more efficacious in keeping unaffected orchards free from the blight. A careful inspection of all pomaceous trees should be made two or three times during the summer and a sharp lookout kept for the first appearance of the blight. It usually takes two or three years for the disease in an orchard to develop into a serious epidemic, but the early removal of the first cases will prevent this and save a great deal of labor later and many valuable trees.

"In doing this work it must be remembered that success can be obtained only by the most careful and rigid attention to details. Watch and study the trees, and there is no question that the time thus spent will be amply repaid."





## THE SOUTHERN PEOPLE.

The inhabitants of the Southern States have long had a reputation for courtesy, hospitality and pleasant demeanor. These qualities have come to them to a great extent in a hereditary way, the original settlers of Virginia and the Carolinas, to say nothing of the vast area of Louisiana, being of gentle stock and comparatively free from the coarse, brusque qualities generally possessed by the hardy settlers of a strange and hostile country.

Undoubtedly, in contending with the grave vicissitudes of colonization, gentle birth and courtly manners were scarcely a valuable stock in trade, their usefulness being probably confined to the more enlightened enjoyment of those precarious moments when a merciful Providence gave them a short respite from the attacks of the Indians and the struggle against poor crops. That their accomplishments were an actual handicap was plainly evidenced, particularly in the Virginia colony, where a previous condition of wealth and idleness made the colonists so reluctant to undergo the heavy toil required that Capt. John Smith had to promulgate his famous rule that he who did not work should not eat. This Virginia colony fell far behind the others, required constant assistance to save it from destruction, and was finally built up only after determined and repeated efforts.

The infusion of knightly blood, however, was destined to bear a very valuable and agreeable fruit. When the keen edge of adversity had worn away and opportunities occurred for the exercise of those graces and virtues which go so far towards making this world a habitable place, the forms and ceremonies, the good-fellowship, the hospitality, the politeness, the generosity, which had been fostered originally in the higher circles of Europe

sprang forth from beneath the covering cast over them by toil and trouble and made these once despised settlements the home of an enlightenment and refinement which had not its equal elsewhere on the American continent.

We witness in the South today the result of all this, and it is now proving a most valuable factor in the advancement of this section. People who come here from elsewhere find themselves among congenial friends, among people who, while their traditions, customs and habits are perhaps slightly different, are disposed to look with courteous toleration on the methods of their new neighbors, and who are too kindly by nature and too polite by breeding to interfere with or object to their idiosyncracies. While this may seem a small matter on casual reference, it is in reality something of great and vital importance. Nothing, in actual practice, so annoys a man as rude criticism and intermeddling on the part of his neighbors. Nothing so soon disgusts him, nothing so soon impels him to move away, as this. Bad crops, sickness, overflows, almost any natural calamities, are less disastrous in their ultimate results. Give him, under whatever adversity may fall upon him, a helping hand, a kind word and an abundance of honest sympathy, and he will cling to a locality through a vast amount of misfortune; but encircle him with a crowd of nagging, fault-finding, discourteous neighbors, and the fairest field becomes a desert and the brightest sky a cloud. The people of the South have, therefore, in their hereditary courtesy a powerful assistant in their attempt to build up their country and fill it with desirable and industrious immigrants. The natural inclination to be hospitable and to lend a helping hand is a tower of

strength. It makes friends for them, it popularizes them, and, incidentally, it enriches them. The hardships to which a gentle lineage subjected their ancestors on the shores of a savage and inhospitable country are being repaid today in the great influx of capital and labor that is coming among them, and which, after it has settled, is glad it came, and is by no means inclined to move away again. To the natural advantages of their section they add all this. It is a possession of priceless value. Let the Southern people keep up this reputation which they have won almost without a struggle, because, aside from its practical value, it is a sacred and beautiful thing. Undoubtedly as the old stock dies out and is replaced by newcomers there will be a slight tendency to forget the quaint, old-fashioned courtesy of years gone by. The struggle for existence today doesn't harmonize with it well. It takes too much time to be polite. It takes too much time to see that some fellow whom we never met before enjoys himself thoroughly while he is with us. What nonsense this is! There is no way in which the people, and particularly the people of the South who are asking for immi-

grants to build up their waste places, can more profitably employ their time than in exercising the courtesy in vogue half a century ago, with all its old-fashioned frills left on it. Years should not destroy it; new conditions should not change it. It must be an instinctive trait that should crop out on every occasion, and it will be one of the grandest advertisements of a section already crammed with a plethora of good things. A substantial, self-reliant people never sacrifice their long-established virtues to the whirligig of time; and in this case both sentiment and material prosperity call for their preservation. Let the people of the South, therefore, newcomers as well as old residents, unite to foster and perpetuate those noble and honorable customs of hospitality, generosity and honor which are theirs by inalienable heritage and tradition. It is hard to build up a reputation, but here is one ready to their hands and which it will be scarcely more than a labor of love to maintain. There will be pleasure in it, and it will comport well with our own *fin de siècle* ideas, inasmuch as there will be profit in it too.





# THE SOUTHERN STATES.

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The SOUTHERN STATES is an exponent of the Immigration and Real Estate Interests and general advancement of the South, and a journal of accurate and comprehensive information about Southern resources and progress.

Its purpose is to set forth accurately and conservatively from month to month the reasons why the South is, for the farmer, the settler, the home seeker, the investor, incomparably the most attractive section of this country.

### A Disaster That Has Wrought Blessings.

An old familiar hymn says that "Misfortunes, though they seem severe," are often mercifully sent for man's benefit. Very many of the people of the Florida peninsula have had an experience that will justify them in accepting the truth of this saying, for when the unexpected and unprecedented frosts of 1894 blasted their orange groves they thought the misfortune was irreparable. But most of them were plucky Americans, and, soon recovering from the effects of the shock, they began to bestir themselves and to utilize their lands for other purposes. It was wonderful how speedily they began to recover from their losses. Now, says the Florida Times-Union, new orange groves are in a thriving condition, and it is a safe prediction that

the crop of 1896 will surpass by many thousand boxes the estimate of yield made after the destruction of 1894. Nor is this all. There has been a great diversity of crops introduced in consequence of that disaster, and while Florida will again be noted as foremost of the citrus producers, she will be famous also for many other products that will enrich her people. On Thursday, June 18, 1000 crates of pineapples were shipped from Jacksonville to the North by the Clyde Line; and this was but one of a number of considerable shipments that have been made this season. In fact, says the Times-Union, the pineapple cultivation of the East coast is assuming such proportions that it will soon assume the first rank of Florida industries, and this is but a forerunner of the marvelous growth of the peninsular section.

What has wrought this wondrous change? The climate and soil were there when the Spanish adventurers first landed on that coast. They have been there through all the years that Florida has been a commonwealth of the United States. Yet it is only within a few years that the State has begun to show its superb possibilities as a producer of a great variety of tropical fruits. The Times-Union explains the seeming miracle by saying: "Hard work, intelligent effort and unflagging perseverance were all necessary to retrieve the losses occasioned by the disaster to the fruit industry, but this spirit has been shown to a noble extent, and the lesson of experience taught by that unexpected and undreamed of calamity will doubtless prove, in the end, one of incalculable profit to the Florida farmer."

There is a valuable suggestion in the

foregoing to the many at the North who were looking longingly toward Florida as their future home and making their plans to go there at an early day up to the time that they read of the heavy frost and the destroyed orange groves. Then they abandoned their intentions, mistakingly thinking that Florida was no place for them.

But the calamity that opened the way for a greater diversity of products than Florida ever sent to market before it occurred has proved that there is no part of our country in which the industrious and thrifty tiller of the soil can so quickly recover from the effects of a crop disaster, nor is there one superior to it for that diversity of products that will enable the intelligent cultivator to market at a handsome profit a goodly percentage of his many annual crops. The Florida orange grower and his brother farmers have been taught the truth of the old adage, that it is not wise to put all one's eggs in a single basket, and they are applying that truth so practically that from one year's end to another they will always have something to sell that people elsewhere will be glad to buy and pay for liberally.

### **Genuine Thrift.**

When a Southern man, for example, inquires how it is that the Yankees have, with some inferior conditions, continued to become so rich, the answer generally is that they are not lazy. There are economic reasons why much wealth has been concentrated at the East and partly at the West, as well as legislative causes; but it is true that the keen, money-making Yankee is not only alert and ingenious, but he is also saving. In Phil. Armour's big slaughter-houses in Chicago and elsewhere he is said to utilize every part of the animal but the squeal. Indeed, we once heard that a Yankee was figuring on the squeal or breath. Now, the tendency southward has been hitherto to waste instead of salvage. It is not so very long ago that Louisiana

planters used to dump molasses of an inferior grade into the river. Now, it is utilized as one of the best materials for fattening stock of all kinds. The truck farmers around Norfolk should learn lessons of thrift. They are said to be operating on a very unwise plan. A correspondent of the *Country Gentleman* says:

"A great majority of our truck farmers are now buying hay for their farm horses at \$16 to \$18 per ton. And yet there is not a man of them but from an acre of his truck land can raise from three to five tons of orchard grass, timothy and clover each year. The great trouble is right here: We are growing too much truck—too many vegetables. We buy Western hay at \$18 per ton and glut all the Northern and Eastern markets with cabbages. We buy manure in sack (fertilizers), buy butter in tubs, and yet we have hundreds of thousands of acres of good stock lands lying idle.

"We can make the manure and the milk and the butter consumed here. The other day a gentleman asked me to tell him where he could get some good cream, say two gallons per day at the start, and to run up to ten gallons per day later on. It could not be found here, not even at \$1 to \$1.25 per gallon. The land is here, the climate is here, the market is here, but the cows and the cow farmers are not here."

The very statement of this case should bring a swift remedy. If some farmers would reduce truck acreage just enough to save in hay and pay some attention to butter and milk production, as well as other necessities that could be raised at home, the example might become epidemical. It is said that a hotel-keeper at Norfolk grew rich because his large family, along with himself, did most of the work and kept the money at home. If the truck farmers around Norfolk will stop leaks—calculate on all but the squeal—and become as famous for thrift as they are for truck, thousands and, in time, millions of dollars will be saved.

A farmer who raises only such products as he can sell, and buys foodstuffs for his



family and his stock, is recklessly unthrifty. The cotton planters pursued that policy until confronted by ruin as a result of it. They are now in large part growing other things to live on and raising cotton as a surplus. The rice growers of Southwest Louisiana expended all their effort upon rice, and paid cash for imported food supplies. As a consequence a temporary collapse of the rice market brought disaster upon them. They are now beginning to raise stock and poultry and such products of the farm, garden and orchard, as will furnish food the year round. Following this course, they cannot seriously suffer even if there shall be occasional bad years for rice. The Florida orange growers thought they could afford to raise only oranges and buy everything else. When the orange crop and the orange trees were killed, there was nothing else to fall back upon. The one only source of revenue had been destroyed, and there was want and suffering and poverty that might have been averted by a thrifty diversification of crops. The lesson has been learned now, and Florida fruit growers will not again rely upon any single product, and will not again pursue the fatal policy of paying out money for food supplies that they can raise themselves.

The Virginia truck farmers need to learn that a farmer's business primarily is to make his farm supply as nearly as possible all his material wants. Only when he has done this can he safely and properly indulge in the speculation involved in raising market crops. There will be years when the grower of any single money crop, whether it be cotton or wheat or tobacco or rice or vegetables or fruits, would be better off by giving all his time and attention and capital to the one crop and buying everything else he might need; but these are exceptional periods, and in the long run such a course brings inevitable loss and disaster.

### Col. Killebrew's Work.

We publish elsewhere an article from a Michigan paper in which are given some interesting facts about the work that Col. J. B. Killebrew is doing in that section in behalf of immigration to the South. If the immigration interests of all the Southern States were represented as ably, intelligently, judiciously and energetically as Colonel Killebrew is representing Tennessee, the volume of agricultural population moving southward would be much greater than it is. Colonel Killebrew is a man of scholarly attainments, and brings to his work a general knowledge of economic subjects and a broad comprehension of the questions affecting movements of population; he is scientifically and practically skilled in agriculture, and can therefore discuss intelligently any agricultural pursuit; he served for a time as Commissioner of Agriculture for Tennessee, and has had, therefore, unusual opportunities for acquiring a thorough familiarity with every part of the State; he is not interested in any way in the sale of lands, and is, for that reason, the better able to get the confidence of those with whom he talks; he is conservative, is careful and exact in all his statements, and those whom he induces to move South never find the conditions less favorable than he has represented them to be; he is a close observer, a man of tact and sound judgment, a courteous gentleman and a ready, entertaining and convincing public speaker. With these qualities, supplemented by hard work, it is not surprising that he is accomplishing large results in promoting the removal of the better class of farmers from the Northwest to Tennessee.

### Yearbook of the Department of Agriculture for 1895.

The Yearbook for 1895 is now ready for distribution. The 656 pages of the Yearbook contain (1) a general report of the operations of the Department; (2) a series of

papers prepared in the different bureaus and divisions of the Department, or by experts specially engaged, and designed to present in popular form results of investigations in agricultural science or new developments in farm practice. These are illustrated by ten full-page plates and 134 text figures; (3) an appendix of 104 pages, containing miscellaneous information and agricultural statistics compiled down to the latest available date, relative to the production, values, per capita consumption, exportation and importation of farm products; (4) an index of thirty pages.

For the information of horticulturists, dairymen and farmers generally, the following table of contents is quoted:

"Report of the Secretary;" "Soil Ferments Important in Agriculture; Origin, Value and Reclamation of Alkali Lands;" "Reasons for Cultivating the Soil;" "Humus in its Relation to Soil Fertility;" "Frosts and Freezes as Affecting Cultivated Plants;" "The Two Freezes of 1894-95 in Florida, and What They Teach;" "Testing Seeds at Home;" "Oil-Producing Seeds;" "Some Additions to our Vegetable Diet;" "Hemp Culture;" "Canadian Field

Peas;" "Irrigation for the Garden and Greenhouse;" "The Health of Plants in Greenhouses;" "Principles of Pruning and Care of Wounds in Woody Plants;" "The Pineapple Industry in the United States;" "Small-Fruit Culture for Market;" "The Cause and Prevention of Pear Blight;" "Grass Gardens;" "Forage Conditions of the Prairie Regions;" "Grasses of Salt Marshes;" "The Relation of Forests to Farms;" "Tree Planting in the Western Plains;" "The Shade-Tree Insect Problem in the Eastern United States;" "The Principal Insect Enemies of the Grape;" "Four Common Birds of the Farm and Garden;" "The Meadow Lark and Baltimore Oriole;" "Inefficiency of Milk Separators in Removing Bacteria;" "Butter Substitutes;" "The Manufacture and Consumption of Cheese;" "Climate, Soil, Characteristics and Irrigation Methods of California;" "Co-operative Road Construction;" "A Pioneer in Agricultural Science;" "Work of the Department of Agriculture as Illustrated at the Atlanta Exposition." Persons wishing a copy of the Yearbook should apply to their Congressmen.



# IMMIGRATION NOTES.

## Col. J. B. Killebrew in Michigan.

Col. J. B. Killebrew is making a vigorous canvas in Michigan for Tennessee. He spoke to a large audience at Riverdale on the 11th, to another large audience at Sumner on the 12th, and on Saturday evening he spoke at the District No. 8 school building to a house densely packed with the most intelligent farmers in this county. There were scores of people who could not gain admittance to the house and stood at the windows to hear his speech.

Colonel Killebrew gave a graphic account of the State of Tennessee, the topographical features, its soils, climate, crops, social conditions and the opportunities and advantages which it offers to industrious and energetic men. He stated that his purpose was not to make anyone dissatisfied with Michigan, for, as he expressed it, "a man always does best where he is contented." But if there are any who wish to emigrate, he desired to invite them to Tennessee—a State not surpassed in natural resources, aptitudes and capabilities by any other in the Union. He spoke of the disadvantages as well as the advantages of the State. He said the public schools and roads were not so good in the country as they should be, but a denser population would soon cure these evils. He stated that he had been sent North by the president of the Nashville, Chattanooga & St. Louis Railway to tell the whole truth to the people, and that he believed President Thomas would dispense with his services if he should make any statement that would be misleading or deceptive, or that could not be verified.

Among the many things he spoke of was the proposed centennial exposition, which

will open May 1, 1897, and continue six months. This exposition promises to be the most beautiful in design and the most attractive to Northern visitors of any ever held in America. The grounds will be skillfully and artistically embellished by every flower that grows in the Southern land. Every resource of the country will be illustrated and every attraction provided to interest, entertain and instruct those who may visit it. He gave a cordial invitation to everyone to come to the exposition and study the capabilities of Tennessee for making homes of happiness, plenty and contentment.

After speaking for nearly two hours to a most deeply interested audience, he requested those present to ask questions concerning any matters about which they might want information. For more than half an hour he was plied with questions upon every conceivable subject, all of which he answered readily and to the apparent satisfaction of his interrogators.

Colonel Killebrew is an educated gentleman, a ready speaker full of enthusiasm and knowledge, and very courteous to all with whom he comes in contact. He has numerous invitations to address audiences in various parts of the State, and those who go to hear him will not be disappointed.—The Independent, St. Louis, Mich.

The Maryland Board of Immigration is preparing a pamphlet, which will be printed in English and foreign languages, setting forth the advantages of Maryland for settlers. The secretary of the board is Mr. Van der Hoogt, and the office is at Annapolis.

# GENERAL NOTES.

## Hops in North Carolina.

Mr. A. L. Jones, formerly editor of the Hop Growers' Journal, of New York, and himself a practical hop grower, now engaged by the Seaboard Air Line to introduce and encourage hop culture in its territory, has this to say about the industry in North Carolina:

"The subject of hop culture has occupied the attention of Northern settlers and prospectors and of Southern farmers and land owners for some time, and to such good purpose that the wide planting and speedy growth of this important industry in the South is no longer a matter of doubt. Go where we will in any section of the country traversed by the great Seaboard Air Line system, and we are told that the business of hop growing has come South to stay.

"It is well for the South that this is so. While the success that has attended the introduction of hop culture into North Carolina has not been phenomenal, it has nevertheless been greater than was anticipated by the first planters, and sufficient to justify the prediction, or assertion rather, that nature intended the hop garden of this country should be right here in the South. So far, the work of planting this garden has been done mainly by Northern men, but the interest taken in it by farmers and land owners generally has been very great. Were it not for the lack of technical and practical knowledge of the cultivation and curing of hops, the business would speedily take on all the characteristics of a boom. As it is, it can be said that the situation is satisfactory in all respects, save one. We are in need of more teachers. We want more experienced hop men among us, men who can properly cure and prepare the crop for market, and from whom we can learn how to rightly conduct the business from the time of planting until the hops are in the bale. Men competent to do or to superin-

tend the work in the field and in the kiln are very much in demand and can command very good pay.

"The development of a new hop region near the Atlantic coast and within easy reach of all the great markets of this country and Europe is not considered at all desirable by the hop growers of the North and West, and is looked upon with more or less disfavor by them. Although the progress made in this State is but little known to the people of the older hop regions, the minds of some of them are beginning to be exercised, as evidenced in letters coming from the hop regions of New York and the Pacific coast States. A few among the thinking ones are quite ready to admit that a revolution of the hop industry of this country is impending. Some of them think a more diversified agriculture would be a good thing for us, but that we ought not to 'diversify' on the hop. They do not all think alike, however. In a letter received not long ago from a valued friend, a hop grower in New York, I found these words: 'It would appear as though nature herself had determined to revolutionize the business and transfer the better part of it to the South.' The writer is coming to North Carolina, and he says elsewhere:

" 'In Dixie's land I'll take my stand  
And grow good hops in Dixie.'

"Yes, he is coming; many others are coming, and we shall welcome them all with right good will. We know they will be glad they came, and that they will, like the rest of us Northern settlers, be glad to stay.

"Hop growing is one of the industries which are being transferred from the North and for the same general and compelling reasons that the spindles and looms of New England are being transferred to the water powers and cotton-fields of the South. Here are the natural conditions, the con-



ditions essential to profitable production, a combination, in fact, of all the desirable and all the requisite conditions. And it is here that the Northern settler and the 'Tar Heel' are going to work together in developing the possibilities and making this the greatest and most prosperous hop-growing State in the Union.

"Of the many conditions favorable to hop culture in the South, climate and soil are the most important. They are the factors that determine the quality of hops. Now, the best hop ever produced in this country comes to us out of the soil and climate of North Carolina. Other favoring conditions enable us to grow two or three pounds of these hops at the cost of production of a single pound in the State of New York. The yield per acre in North Carolina is equal to that in New York, and the Carolina crop can be put on the market before that of New York has left the field. These are facts amply demonstrated, fully proven and no longer disputed.

"Whatever twist a revolution of the hop industry of this country may give to the hop poles in New York and Western fields, North Carolina will continue to train the vine in the way it should go, and quietly harvest the winning hop. And when our brother hop growers at the North and the West begin to look about them in order to find out just 'where they're at,' we will show them that hops grow well in both the sandy and the red clay loam of the Old North State and that they had better come here and stick as many poles into the ground as they can.

"The Northern settler who comes here to grow hops for his own profit while he is growing up with the country for the country's good, very naturally does some figuring over the cost of things. He goes at it and finds in due time that land, labor and lumber are cheap enough. He finds that the cost of living is less here than at the North. He finds that in this climate he has many more days in a year in which he may go about his business out of doors than he ever had before in any year of his life. He finds a climate in which 'life is worth living all the year round.' He finds health in the waters and 'inspiration in the very air.' He finds a great many good things, and without any trouble at all he finds that he can

get plenty of hop poles for a cent apiece. And now he wants to find out what it will cost to establish a hop-yard and maintain it until it begins to pay.

"To help him along, we hand him the account of a ten-acre hop-yard lately established in the northern part of the State. I know that most of the items in this account are correct, and I believe all of them are.

"The cost of the land is not included in this statement. Equally good hop lands can be bought for from \$5 an acre up. The cost of preparing the land and planting the ten acres to hops, together with the amounts paid for roots, freight, etc., was \$142.56. For poles, \$75. Fertilizer used and to be used the first year, \$33. Total, \$250.56. The cost of cultivation the first year, it is expected, will be more than paid by other crops grown between the rows of hops. These crops will be potatoes, peas and Kaffir corn. The hop-house on this place is expected to cost, when fully equipped, about \$200. This plant, it will be understood, is not an annual plant, nor is it an annual expense. Let us call it a semi-centennial plant, for it ought to be good for fifty years. If the farmer does not crop his vines the first year, he will have plenty of time in which to put up a hop-house, and if he will 'turn to' and do a good part of the work himself he can establish such a plant for much less money. As a hop grower, the North Carolina farmer has advantages possessed by no other hop grower in this country. He poles a ten-acre hop-yard in this State for \$500 less money than it can be done for in the State of New York.

"He pays for field labor about one-third the price paid in New York, and the harvesting of his crop does not cover over one-quarter as much. He has a picking season nearly twice as long as that in New York, and twice the acreage can be handled in his curing-house. His picking is done by the best kind of 'home pickers'—colored people who board and house themselves, give no trouble, and do the work in the most satisfactory manner. His hops may be allowed to remain on the vines for some days after they are ripe, and without deterioration and with but little loss of lupulin. None of the insects that infests Northern and Western hop-yards have ever appeared in his yards, and no disease or pest of any sort has ever



been found in the hopfields of North Carolina.

"Now, it goes without saying that the Northern settler and the Southern farmer ought promptly, and for their own profit, to avail themselves of these manifestly great and valuable conditions and advantages. By prompt action and the intelligent utilization of these advantages the coming revolution of the hop industry of this country must and will terminate in favor of the South."

### **Farmers in the Northwest Eager to Move South.**

The "Southern States" is in receipt of the following letter from an observant and reliable correspondent now in the North-west:

"I have never seen the farmers so interested in any place about the South as they are here. The great cause of dissatisfaction arose from the late period in which the crops mature, the consequent low prices, and the want of good home markets. When the potatoes, for instance, reach market, the market is glutted with potatoes from all parts of the country. The same may be said of all vegetables, fruits and berries. I have taken pains to inquire what returns the farmers received from their farms, and I find in this portion of the State the sales of crops grown on a 40-acre farm will not average \$150 per annum. After the payment of taxes and the payment of the interest on mortgages, which unfortunately burden more than half of the farms, there is absolutely nothing left to supply the farmer with any of the comforts or conveniences of life. The severity of the winters also is a great tax upon the farmers. What earthly reason can be given why these intelligent men and women should remain in a climate that requires one-third of their toil in order to pass comfortably through it?

"All intelligent farmers here now recognize the fact that early crops mean good prices; late crops, low prices. I think the only thing that prevents a general exodus of the people from this section southward is the difficulty they have in disposing of their farms. There are ten farms for sale where there is one buyer. This immediate region is handsomely improved with excellent farm houses, the buildings often hav-

ing cost more than the farms are now worth. It is unfortunate for the farmers here that in flush times they had an abundant credit. Oftentimes they mortgaged their farms to make these improvements. These mortgages are now the bane of the farmers' lives, for as many of them cannot meet the interest, the mortgagee takes immediate steps to foreclose the mortgage, and the farmers in many instances are compelled to see their farms sold for the money that was borrowed to improve them."

The third annual meeting of the Georgia Dairymen's Association will be held at Macon, August 19 and 20.

The officers are R. J. Redding, president, Experiment; R. E. Park, vice-president, Macon; M. L. Duggan, secretary, Sparta; H. J. Wing, treasurer, Experiment. It is expected that the meeting will be attended by a number of dairymen from Northern States.

### **A Strawberry Town in Southern Missouri.**

Sarcxie is the strawberry town of Southern Missouri. It was discovered that it was particularly designed for strawberry culture in 1889. A few years before that a nurseryman put out a few plants, and found the berries therefrom exceedingly good. He then planted a few acres, which were so profitable that his neighbors gave up the cultivation of corn and planted their stony fields with strawberries. The strawberry acreage increased gradually, until now 500 acres are under cultivation, and this year 1000 acres more have been put in young plants, which will bear next season. There is now one strawberry farm of 100 acres, several of fifty acres, and from that down to one acre. The business men, lawyers, doctors and clerks have the strawberry fever, and it is difficult to find a man in Sarcxie who doesn't grow strawberries. The net annual income to the town from strawberries is about \$40,000, and next year it will probably be over \$100,000. About \$30,000 is paid in wages ever year to berry-pickers, and this will be more than doubled next year. It took 5000 persons to pick Sarcxie's berry crop this year, and 10,000 will be needed next year.

The berry growers have an organization that protects their interests and makes their



crops profitable. They have banded themselves into a horticultural association, which elects a directory of five from its members. This directory is in perpetual session during the berry season, which lasts four weeks, beginning May 10. The association sells the products of the day when the day comes. Bids for the fruit are sent to it from all over the country, and the berries go to the firm that has the best commercial rating and reputation for honesty and bids the highest price. Ten carloads a day are the average shipment from Sarcocie. This means 6000 crates, or nearly 150,000 quarts of berries.

The profits of berry culture are variable with the season. The gross receipts from an acres of berries are about \$125. It costs about \$15 an acre to buy plants and set them out, and about as much more for cultivation and other expenses. A Sarcocie berry grower received \$600 this season for the product of four acres of exceptional berries and the purchaser paid for picking them. Another made \$375 from three-quarters of an acre, and so it goes. Some of the land on which the strawberries are most successfully grown is not fit for anything else, and would not sell for \$10 an acre.

Around and about the town of Sarcocie are camped 5000 berry-pickers. The berry-picking season is the annual vacation of the people within a hundred or more miles of Sarcocie. As the picking season approaches, the horticultural association advertises for pickers, and they begin to come in from the Ozark country, Kansas, Indiana, Indian Territory and Oklahoma. They come in parties of fifty and a hundred sometimes, their white-covered wagons catching up with one another or meeting at cross-roads, and naturally forming into parties.—Kansas City Star.

### **Texas Fruit Palace.**

The Texas Fruit Palace in Tyler will open its doors July 8. A building covering nearly two acres and having a seating capacity of 8000 has been erected. The Mexican Band and several theatres will furnish amusement for the thousands who are expected to be in Tyler at that time. The State encampment will also be held in Tyler at the same time, and altogether the city will have the biggest jubilee in its history.

The flower display, it is said, will be the largest ever seen in Texas, the entire first floor of the building having been set aside to the exhibits of fruits and flowers, and no display of merchandise will be within the building except such as contribute directly to the entertainment of visitors.

### **The Florida Orange Outlook.**

M. S. Moreman, the traveling representative of the Florida Fruit Exchange, estimates the probable production of oranges for the next season at 125,000 boxes, as against less than 50,000 for the season of 1895-96. Some oranges will be produced in almost every part of the orange-growing belt of the State, though, of course, in small quantities in most parts. The recovery of the trees is not so rapid, according to Mr. Moreman, as many have anticipated it would be, but he stated that it was satisfactory. About half of the acreage that was flourishing before the disaster of fifteen months ago is now being recovered by active efforts, while the rest is being neglected or is but indifferently cultivated.

### **American Fruit Growers' Union.**

Representatives of a number of fruit growers' unions and associations met in Chicago recently and organized a national association to be called the "American Fruit Growers' Union," the purpose of which is to protect and aid fruit growers in shipping and marketing their products. In a circular issued June 10th from the office of the Union, at No. 2 State street, Chicago, it is said that:

"We organized the American Fruit Growers' Union successfully, and the backing it received, and the enthusiasm manifested by the delegates present insures its permanency and future success. Nearly every fruit-growing State in the Union, as well as several provinces of Canada, were represented in person, the delegates actually controlling over 50,000 carloads of fruit. Both deciduous and citrus fruits were represented.

"The membership in the American Fruit Growers' Union will be confined to delegates elected by the various State and Provincial associations, and one vice-president for each State elected by the American Fruit Growers' Union.



"Arrangements will be made whereby all competing sections will be notified through the State organizations of the movement and amount of fruit shipped from competing sections to the same time. In this manner we hope to avoid glutting any market by a voluntary distribution. No steps will be neglected looking toward keeping every section posted as to the necessities of each market and the shipments en route.

"A list of the most reliable commission houses in every city is being prepared, and contracts will be made with them to handle the business of our members at very much reduced commission. We have already made several contracts with auction houses in the larger cities whereby practically one-half of the commission is saved for our members, and similar contracts will be made in all cities large enough to support an auction house. In fact, it can be said that nothing is being left undone to thoroughly protect our members at the places where they most need protection, that is, at the markets.

"Should any commission house or buyer mistreat one of our members, our constitution provides that, upon the matter being reported to our general manager, a thorough investigation will be had, and if it is found that the charge is true, the American Fruit Growers' Union must take such legal steps as may be necessary to force a proper settlement—free of expense to the member making the complaint. This, you will readily see, is one of the most valuable provisions possible to be made in protecting the shipper. No corporation or firm would care to fight as powerful an institution as the American Fruit Growers' Union, although they might take their chances with an individual or smaller association.

"Our executive committee will also examine into any discrimination against any section on the part of railroads or refrigerator companies, and in any way possible to adjust said discrimination or furnish evidence to prove said discrimination should legal steps be taken.

"The management of the American Fruit Growers' Union is vested in an executive committee of seven (7) members elected annually. All officers handling funds of the Union are under suitable bonds. At pres-

ent, no elective officer receives any salary except their actual expenses while in performance of duties pertaining to the office. The general manager and his assistant are employees of the Union through the executive committee.

"Our constitution provides that the total charge made by the American Fruit Growers' Union for looking after shipments shall not exceed \$1 per car. In view of the services we propose to render to shippers, this amount may seem extremely small, but when the fact is taken into consideration that we expect not less than 50,000 carloads of fruit to be handled through our Union, it will be seen that an ample amount will be derived from assessment to pay all expenses if economically administered, and probably leave a surplus. It is the intention of the executive committee to reduce this assessment to such a point as will make it simply sufficient to cover the cost of the services rendered, it being purely a co-operative organization, and so chartered under the laws of the State of Illinois, and it is unnecessary that it lay up any large amount of surplus.

"Our constitution provides that there shall be no dictatorial or arbitrary methods in dealing with our members. The Union does not propose to force members to ship to any certain markets or to dictate in any way in so far as the members themselves may agree by assenting to the terms of the constitution. We propose that the American Fruit Growers' Union shall be the servant of its members and not an arbitrary master. We believe that through this Union the growers in the different sections will be brought closer together; that they will feel that the interest of one is the interest of all, and that the interchange of views and experiences as to past methods of conducting their chosen profession will be simply invaluable to all."

The officers of the Union are: President, John D. Cunningham; secretary and general manager, Willis Brown; assistant general manager, H. J. Underhill; treasurer, Northern Trust Co., Chicago. The executive board is as follows: T. H. B. Chamblin, director Riverside Fruit Exchange, organizer Southern California Fruit Exchanges, Riverside, Cal. C. W. Benson, manager Texas Fruit Union, Alvin, Texas. E. H. Fay, manager Chautauqua Grape Growers'



and Shipping Associations, superintendent of shipping Alabama and Georgia Fruit Growing and Winery Associations, Portland, N. Y. F. H. Jinnette, director Anna Fruit Growers' Shipping Association, Anna, Ill. Wm. A. Gardner, president South Central Missouri Fruit Growers' Association, West Plains, Mo. John D. Cunningham, president Georgia Fruit Growers' Association, Marietta, Ga. Willis Brown, president Oregon Fruit Union, secretary Information Bureau Northwest Fruit Growers' Association, Portland, Oregon.

### **Agriculture in Mississippi.**

The following paragraphs are taken from a report on the climate, soil, productions and agricultural capabilities of Mississippi, issued some years ago by the United States Department of Agriculture. Since the investigations on which this report was based were made, the State has made great progress in agricultural development and improvement:

"Mississippi is essentially and pre-eminently an agricultural State. Nature designed and fashioned it to bless and reward the labors of the husbandman. What the State lacks in mineral resources is more than counterbalanced by a generous, responsive soil, and almost ideal climate, and productions the value and variety of which are not excelled in any part of the Union.

"The first Europeans who trod its soil—the adventurous and romantic expedition of Hernando De Soto—found its surface richly carpeted with the native grasses, and maize or Indian corn, one of the chief foods of mankind, 'of such luxuriant growth as to produce three or four ears to the stalk.' No State in the Union has been more liberally endowed by nature with all the conditions favorable to agriculture, and that it possesses the requisites for great manufactures, to consume and put into marketable shape its varied products of raw material, is now no longer a matter of experiment.

"In one sense of the word Mississippi is still a new State, with its immense natural advantages as yet mainly unappropriated. Its great forests of valuable woods have been comparatively little depleted; many of its numerous fine mill and manufacturing sites await the power of skill and capital; more than one-half of its area remains untouched by the husbandman, while the part

already in cultivation may be made to double its productive power by improved methods of agriculture. \* \* \* \*

"The great, rich alluvial plain lying in Mississippi, and commonly known as the Yazoo delta, is one of the most important formations, not only in the State, but in the entire Union. It lies between the Mississippi river on the west and the Yazoo river and its tributaries on the east, and from the line separating Mississippi and Tennessee on the north to Vicksburg on the south. It comprises about 6250 square miles, or 4,000,000 acres, of some of the most fertile and productive soil in the world. It is larger than the combined area of Connecticut and Rhode Island, and almost half as large as these two States and Massachusetts all combined.

"This vast delta is ellipsoidal in shape, and its dark, rich alluvium has been formed by the overflow of the Mississippi and Yazoo rivers and their tributaries. At its northern limit, the State line, it is very little more than ten miles wide, but the Mississippi river, turning to the southwest, it widens rapidly, and thirty miles southward, where the dividing line between Panola and Tate counties would strike the bluff near Helena, Ark., it is about thirty-six miles wide. Opposite Charleston, Tallahatchie county, the bottom is about fifty-eight miles wide. It reaches its greatest width about opposite the town of Carrollton, Carroll county, where it is about sixty-eight miles wide, and from thence it at first narrows slowly, and at last rapidly. Opposite Yazoo City it is still more than forty miles wide, but ends near Vicksburg, where the hills extend to the bank of the Mississippi river. Of all this fertile plain only about one-eighth, or 500,000 acres, is improved, the remainder being covered with vast forests of valuable timber. The prejudice which long existed as to its supposed unfitness for cultivation and for health is rapidly dying out, and it is now generally considered, in its vast possibilities, of more value than all the other sections of the State combined. It is true that much of the delta is subject to overflow in times of high water, and on this account has often been avoided, but with a proper system of levees this disadvantage may to a great extent be removed. Even the lands subject to overflow, with the present system of levees,



will, on an average in a given series of years, produce better returns than most of the upland country.

"The soil of the delta is of two classes, loam and clay, the former varying in color, but generally dark and easy to cultivate. The clay lands are popularly known as 'buckshot lands,' from the soil drying into angular bits the size of a buckshot, and of a lead color. When wet this soil is soft, smooth, and slippery, and when dry is loose and light, and falls to pieces. The 'buckshot' lands are considered the most productive in the delta, taken one year with another, and will easily produce, with proper cultivation, from one to two bales of cotton, and from sixty to eighty bushels of corn per acre. Professor Hilgard ascribes their fertility mainly to certain ferruginous concretions which they contain, and deems them almost inexhaustible. \* \* \* \*

"The climate of Mississippi is all that could be desired for agricultural purposes. It is a happy medium between the extremes of heat and cold. The winters are short, mild and pleasant; the summers are in the main devoid of the intense heat often felt in more northern latitudes. The summer heat is, indeed, more prolonged, but much less oppressive than farther north, owing to the proximity of the State to the Gulf and the prevalence of cool, refreshing winds blowing from that direction. The thermometer seldom reaches 100 degrees in summer in any part of the State. June, July and August are the hottest months, but the range of temperature for the State in these three months is about from sixty-four degrees to ninety-five degrees, with a mean of about eighty-one degrees. In winter ice of about an inch in thickness forms in the northern part of the State, while in the southern part frosts rarely occur. November, December and January are the coldest months. The average winter temperature is not below forty-five degrees, and the thermometer seldom falls to twenty-five degrees. It is a well-established fact that in the course of a year more outdoor labor can be performed with less inconvenience than in regions farther north. As has been elsewhere stated on the subject of labor, there is no climatic obstacle in the way of white labor in the State. The elevation of the State is, moreover, greater than is generally supposed, and this gives a climate

normally belonging to regions from one to two degrees farther north. \* \* \* \*

"Mississippi as an agricultural country has advantages unsurpassed in the vital matter of rainfall. The abundant luxuriant vegetation to be seen here on every hand during the hottest summer months shows the presence of ample moisture to vitalize and promote the growth of all vegetation. As a matter of course there are short seasons of drought occasionally, for these occur everywhere, but they are less frequent here than in many States, and are generally confined to small and widely separated areas. The rainfall is usually copious throughout the State in the spring and summer, while the annual precipitation is more or less evenly distributed in all sections of the State. From the south and west come the regular rain winds, bringing refreshing showers, highly conducive to the growth of cotton, the cereals and other vegetation. The tables of the census give the annual rainfall in North Mississippi at from forty-eight to fifty-eight inches per annum, while in South Mississippi it is fifty-eight inches per annum. The high country lying between the Tombigbee and Yazoo rivers has fully fifty-eight inches per annum, and the Yazoo delta has as much as forty-eight inches of annual rainfall. The degree to which the State is favored in this respect may be appreciated when it is remembered that the country west of the Mississippi ranges from twenty to as low as four inches of rainfall per annum. Kansas, Texas and the Indian Territory have from twenty to thirty-eight inches per annum, and Maine, New York, Virginia and Ohio from thirty-two to forty-six inches per annum. Tennessee and Kentucky have from forty-six to fifty-six inches per annum, the same as the north half of Mississippi, and the country near the Northern Lakes, east of the Mississippi, from twenty-four to thirty-six inches per annum.

"If the old adage that 'health is wealth' be true, Mississippi may be considered an exceptionally opulent State. It is rich in the conditions of health, and the facts will demonstrate that it is one of the healthiest States in the Union. This subject is worthy of consideration here as vitally affecting the results of agriculture. An impression prevails in some places outside of the State that Mississippi is very unhealthy. How



little foundation there is for this belief will be seen by an examination of the mortality tables of the United States census. It should be remembered in this connection, that the statistics of health in Mississippi include, of course, the entire population, white and colored, and that the death rate among the colored population is quite high, being 17.28 per thousand throughout the Southern States. It is suggested in the census that the difference in mortality between the white and colored people in the Southern States is especially well marked, and is largely due to the relatively greater number of deaths among infants in the colored population. The following table of comparative statistics compiled from the census will be a sufficient answer to the assertion sometimes made that the State is unhealthy:

Annual death rate for each thousand of population.

Massachusetts .....	18.59
New York.....	17.30
Virginia .....	16.32
Indiana .....	15.77
Texas .....	15.53
Kansas .....	15.22
Pennsylvania .....	14.92
Illinois .....	14.60
Kentucky .....	14.39
Alabama .....	14.20
Georgia .....	13.97
Colorado .....	13.10
Mississippi .....	12.89

"In 1878 Mississippi took steps to avail itself of the munificent grant of the general government, passed in 1862, to encourage the establishment of industrial colleges in the States 'to benefit agriculture and the mechanic arts.' Although the State was tardy, on account of the war and the disorganization which followed it, in adopting means to appropriate the benefits of this act, when it did begin the work it was prosecuted with an earnestness and liberality which has placed the cause of agricultural education here in advance of some of the Southern States where the system was inaugurated much earlier. The act of Congress, among other things, provided for the endowment, support and maintenance in each State of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches

of learning as are related to agriculture and the mechanic arts in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes. The prime object—instruction in 'agriculture and the mechanic arts'—herein outlined, has, in this State, been rigidly and literally observed. Other studies are taught as a matter of course, but they are considered as secondary to these interests, and rather as instruments to more readily understand the principles which underlie agriculture and the mechanic arts.

"In 1878 the legislature passed the act to establish the 'Agricultural and Mechanical College of Mississippi.' At that time the agricultural land scrip represented 207,920 acres, which had been previously sold at ninety cents per acre, realizing in currency \$188,928, which by judicious management has been increased to \$227,150, now in the State treasury, and represented by 20-year bonds running from 1876 to 1896, and bearing 5 per cent. interest per annum. This fund was equally divided between 'Alcorn University and Agricultural and Mechanical College,' for colored students, which had previously been established at Oakland, Claiborne county, and the 'Agricultural and Mechanical College of Mississippi,' afterwards located at Starkville, Oktibbeha county, for the education of the white youth.

"It will be observed that the two institutions, while kept separate and distinct, were endowed on terms of perfect financial equality. Liberal appropriations from the public funds have been made at each succeeding session of the legislature for both of these institutions, and their prosperity has been substantial and gratifying. The 'Agricultural and mechanical College of Mississippi' is presided over by General Stephen D. Lee, a practical and thoroughly earnest educator. This institution has a deep hold on the affections of the agricultural classes of Mississippi, and is destined to accomplish much good in educating and directing the minds and tastes of its pupils to agriculture, horticulture, stock farming, management of farms, manner of performing labor, and the mechanic arts. The education imparted here is also practical and illustrative; students are required not only to be familiar with labor, but to labor them-



selves, which, indeed, constitutes an important part of their education. The buildings are handsome, permanent and commodious; the farm embraces 1940 acres of land, 600 of which are under cultivation, including gardens and grounds. The farm is also well stocked with improved breeds of cattle, and with a complete outfit of the latest improved agricultural implements and farm machinery.

"The average attendance of pupils has been about 300, while at the session just closed it reached 317. Students are apportioned among the several counties of the State, according to the number of educable white children, thus giving each county an opportunity for representation.

"The 'Alcorn University and Agricultural and Mechanical College' for colored students is presided over by ex-United States Senator H. R. Revels, colored, who takes a deep interest in the success of the institution. Tuition is free, as in the college for whites, and the State has appropriated, in addition to the interest derived from the agricultural script fund, all the money required for its successful maintenance. \* \* \* \* \*

"As indicating the growth of diversified industries in the State, it may be mentioned that a very profitable and handsome business has been built up in places adjacent to the railroad lines in the production and shipment of fruits and vegetables to the larger cities. This new industry has been steadily growing for a number of years, until it now assumes proportions reaching into the thousands at a number of points in Central and Southern Mississippi along the line of the Illinois Central Railroad. The acreage in fruits and vegetables is constantly being increased, and the industry, inaugurated by a few progressive minds, bids fair to spread and widen until it embraces all points accessible to markets, thereby becoming an important factor in the State's production. The success which has attended the efforts of those who have engaged in the business shows what may be accomplished when it increases sufficiently to obtain concessions from railroads in the matter of rates, rapid transportation and improved methods of handling. New markets will be opened up, a healthy rivalry will be established to produce the best results, and there will be a mutuality of inter-

ests prompting organization and co-operation in all things tending to promote and advance the industry. A direct result, and one already foreshadowed in the State, of the growth of the business and increased production will be the establishment of canneries to utilize such stock as may be on hand at seasons when the markets are depressed to such an extent that it is no longer profitable to make shipments. This sometimes happens late in the season.

"In the central and southern portions of the State fruit and vegetable production as a business has been found so profitable as to obtain a firm footing within the past few years. This part of the State possesses many advantages for successful fruit and vegetable growing, and is attracting the attention of market gardeners of the North and West. The winters are mild and short, and successive crops of a large variety of vegetables can be raised during the year with outdoor culture. It is claimed that in the extreme southern portions of the State, with reasonable attention, green peas, lettuce, radishes and a number of other vegetables can be raised every month in the year. The varieties of fruit which grow here successfully include species grown in more northern latitudes, as well as those which nearly approach the tropics.

"The soil in South Mississippi is a sandy loam, while higher up it contains a great deal of lime, conditions considered favorable to profitable fruit and vegetable growing. The fig tree and the vine bring the most satisfactory results, with but slight attention. In the southern part of the State the fig, which bears regularly every year, matures its first crop in May and the second and more abundant crop in June and July. It is of long life, and neither tree nor fruit is subject to disease. The dry season, which usually occurs about the time of maturity of the fig, renders the preserving and drying of it a labor of easy accomplishment. Peaches, pears and apples do well, but difficulty has been experienced in obtaining a variety of the latter which will keep well during the winter. Oranges are quite extensively and successfully grown on the coast, and are considered equal in flavor to the Florida oranges. The Scuppernong grape is also largely grown on the coast, and to a less extent throughout the State. From it excellent wines are manufactured.



The Concord, Catawba and Martha grapes have found most favor. The vines are usually planted in February, and most of the varieties mature in June and July. Blackberries and dewberries are indigenous throughout the State, and grow luxuriantly in fields and woodlands. On fertile lands these fruits compare favorably, both in size and flavor, with the cultivated berries, and are no doubt susceptible of great improvement by cultivation.

"Strawberries have attracted the most attention, and are considered the safest and most profitable crop. Plants put out in June yield a full crop the following spring, when kept clear of grass and weeds and well cultivated in the fall. The Wilson, Albany, Imperial and Monarch of the West are the most approved varieties. They are easily cultivated, and boys and girls are generally employed to gather the crop. The first shipments from this State are usually made about the 15th of March in each year to Chicago, Ill. \* \* \* \* \*

"Good pasturage, an abundance of water, short, mild winters and accessible markets are the advantages Mississippi possesses for stock-raising.

"The farmers of the State have long waged an energetic warfare against grass, which they considered their most troublesome foe; they are now beginning to look upon this growth as their strongest ally, and with a new and proper appreciation of the immense value of this crop to the agricultural interests of the State. The warfare against 'General Green,' to use a popular plantation expression, of course necessarily continues in the cultivation of crops, but many are finding by experience that the profits on grass and stock often exceed those on the crops, and the disposition to engage in this new departure as a matter of business has increased greatly in the past few years in all sections of the State.

"The question of ascertaining the grasses best suited to the soil and climate of the State has been made the object of many experiments, much thought and attention by the most progressive farmers and stock-breeders of the State.

"Of late years, since the exclusive culture of cotton has by repeated disastrous experiments proven unwise and unprofitable, the interest in grass and stock has assumed great importance. Probably no other sub-

ject has for years enlisted the attention of intelligent farmers and landholders so generally; and this awakening interest is destined to grow and widen until Mississippi takes its proper place among the grass and stock-producing States. It is a subject of vital importance, no less on account of its effect in the amelioration and restoration of exhausted lands than the certain and direct profits to be obtained therefrom.

"The grasses of the State, which are commonly referred to as natural and pasture grasses, which grow spontaneously, with little or no care and attention, constitute a never-failing and exhaustless mine of wealth, which, when properly worked, will afford a new and valuable source of revenue. Of this class the well-known Bermuda (*Cynodon dactylon*) is considered the most valuable and is entitled to the first place, but its precedence is being energetically contested by a comparatively new and powerful rival, the Japan clover, or *Lespedeza striata*. The Bermuda, while an introduced grass, like the Japan clover, is now so well established that it may be very properly considered as a native. \* \* \* \*

"Almost all of the cultivated grasses and clovers have done well in Mississippi with proper care and attention. There have been failures in some instances, it is true, but they have generally resulted from careless and improper preparation of the soil at planting. The following article on the feedstuffs of Mississippi, prepared for this report by Prof. John A. Myers, State chemist, and professor of chemistry in the Agricultural and Mechanical College, is full of interest:

"Although during the late civil war Mississippi swarmed with stock (cattle and hogs), and was one of the chief granaries from which some of the armies drew their supplies, it is not unfrequently stated that Mississippi is unsuited for the growing of stock. It is very strange that within twenty years after the State has been known to be capable of supporting such vast herds of stock the impression should prevail that stock cannot be grown. It can only be explained by taking into the account that just after the close of the war the price of cotton ran so high that it dazed the farming community so completely that they parted with all of their stock and went to raising cotton. We venture the assertion, how-

ever, that there is scarcely a State in the Union that has superior natural facilities for this pursuit than Mississippi.

"The question is often asked, is there any forage in Mississippi for cattle? We answer, yes, abundance of it; and if the farmers would only let the grasses grow instead of trying to kill them, Mississippi would in a few years become one of the most important grazing States in the Union. In spite of their efforts, however, the grasses are gradually gaining ground; and many of them are now so perfectly scattered that the land will rapidly become "set" in them when not in actual cultivation. These grasses, while largely different from those familiar to the stock-growers of the North and West, are as nutritious and valuable feedstuffs as many of the most highly-prized grasses of those regions. The variety of grazing is greater than it is farther north, just as vegetation is more luxuriant in warm countries than in cold. Besides this, many of the grasses so highly prized, such as orchard grass, the clovers, timothy and the millets, do as well here as anywhere else, so far as trials with them have been made. But, without these, we have a number of grasses, as Bermuda grass, Lespedeza or Japan clover, which grow wherever there is any soil to cling to, when they once get introduced. These afford pasture during the summer, fall and winter. In the spring there is a variety of grasses which come on rapidly and afford most excellent pasturage."

### **The Relative Value of Land North and South.**

The "Southern States," in its issue for November, 1895, said:

"Is not an acre of land in the South that will produce in a year more revenue than an acre in Iowa, Ohio or New York worth intrinsically as much? And yet, while land in these last-named and other Northern States is held at \$30 to \$100 an acre, land in the South, capable of yielding more money in a year, can be had for from \$2 to \$10 per acre. The price is low because there are millions of acres more than the present population can cultivate. As the population increases through immigration prices will rise. Prices are now much higher than formerly in some localities. Can the Northern farmer afford to go on cultivating

high-priced land that will never increase in value, when for a tenth to a fourth of the value of his farm he could get another in the South on which he could make more money and live in more comfort, and which would be getting more valuable every year?"

The Jacksonville (Fla.) Times-Union elaborates this idea as follows:

"The low price of land in the South should attract immigrants from the Northwest, where a farmer has to pay four times as much as in the South for land no better than he could obtain in this section. One hundred acres of land that in the South would represent an outlay of only \$500, would cost \$2000 in the West.

"These conditions are purely artificial, and are sure to change. In fact, the change has commenced already. In the Northwest land is beginning to decline in price. In the South it is rising, and in ten or fifteen years, by a slight shrinkage in the former section, and a large gain in the latter, the price of land will be equalized.

"It is the part of wisdom then—it is only plain common sense to sell that which will depreciate and buy that which will appreciate. A Western farmer who owns 100 acres of land can sell, pay the expenses of moving his family South, buy an equal amount of land equally good, and that in ten or fifteen years will be equally valuable, and have left more than \$1000 in clear cash.

"This fact is beginning to be known and appreciated to an extent that has turned a considerable tide of immigration southward. It is also known that a greater diversity of agricultural products can be grown in the South than at the West, and proper diversification is the only guarantee against glutted markets and ruinous prices."

### **The One Thing Lacking.**

The following pointed and forcible complaint from a county in Tennessee will apply to many localities in every Southern State. The article is taken from the Leader-Review, published at Humboldt, Tenn.:

"It is a rather remarkable fact that while Gibson county is regarded as one of the richest in the State, where agriculture has reached a comparatively high state of perfection, that it has not been brought into more prominence as a Mecca for home-



seekers. It is true a number of settlers have located within our borders during the past few years, but in proportion to our advantages, they have been few and far between. The hub of the great fruit and vegetable belt of Tennessee, with annual shipments of hundreds of thousands of cases of fruits and vegetables to markets embracing the Northeast and West, carrying with them a practical object-lesson of our resources and capabilities, we have reaped practically no harvest at all from an immigration point of view. Why this thushness? It is because we have pursued the even tenor of our way regardless of what the world's opinion of us might be. We have made no effort at all to show up our advantages and secure immigration.

"While we have thus been idling along, some of our far less favored sister counties have been doing some faithful missionary work in the bleak Northwest, and as a result they are showing us a clean pair of heels in the race of growth and improvement. Down in Fayette county hundreds of Northern people have bought lands and are making homes, and are identifying themselves with the business interests of the community. Land has advanced in price from 50 to 100 per cent., and still settlers are pouring in. This is the consequence of advertising and showing up the resources of the county. Something like two years ago a land company was organized down there, composed of some of the most enterprising men of that section. They at once proceeded to advertise by means of thousands of pamphlets, maps and circulars. They also advertised in a number of Northern papers and sent immigration agents up there, and generally inaugurated a great advertising scheme. Colony after colony of thrifty Northern farmers settled in Fayette as the result of this publicity. These people have brought a great deal of money into that section, and have given a stimulus to trade that has not been felt before since the war.

"It is said that trade is nearly double what it was previous to this influx of settlers. Everybody is prosperous and happy in old Fayette, and her sun-baked and gully-washed old red hills that were only the abiding place of the molly-cotton-tail and the festive 'possum, are beginning to wear a more cheerful appearance under the own-

ership of the energetic Northerner. So much for enterprise and pluck. On the other hand, look at Gibson. A county far superior to Fayette in natural advantages, situated in the heart of the garden spot of the South—a veritable laggard in the matter of immigration. It is a ridiculous fact that adjacent counties are being advertised on the strength of Gibson's productiveness and resources, while we contentedly sit high and dry and get nothing. What do these advertising counties have to say for themselves? Why, they say that they are situated within the fruit belt of Tennessee, and that it is incomparable in productiveness. Then they cite figures taken from Gibson's fruit and vegetable shipments to prove their assertions. We do not advertise—and we do not get any of the benefits of immigration and increased land value. We simply sit still and allow others to make off with what, of a right, belongs to us.

"Gibson is acknowledged to be one of the finest sections of country in the entire South, taken from all points of view, and we should have the enterprise to make the most of it. The matter of a comprehensive centennial exhibit should be given prompt and special attention. The centennial is progressing apace, and will afford a chance for advertising our county that will never be equalled again. If the county court cannot be induced to make an appropriation, then the matter should be taken up by our citizens and a private subscription raised for the purpose. The centennial will not be complete without Gibson county's fruit and vegetable exhibit, and it should be there by all means. And above all, it should be a splendid showing up of Gibson's matchless resources and productiveness."

Mr. S. B. Hughes, of Pittsburg, Pa., has bought 650 acres of land near Tifton, Ga. He will begin work at once to clear the land preparatory to planting a large orchard in peaches and Japan plums next fall.

#### Florida Colonization.

The Cincinnatus Farms is the name given to a tract of 115,000 acres of land on the east coast of Florida, owned by Mr. A. O. Russell, president of the United States Printing Co., of Cincinnati, Ohio. The land, now partly overflowed, will be re-



claimed and connected with the Florida East Coast Railway by standard-gauge railroad ten miles long. Mr. W. W. Russell, manager of the property, writes to the "Southern States" from Sebastian, Fla., as follows:

"I can say at this time that we have been at work during the past two months building our ten miles of railroad of standard construction, connected with the Florida East Coast Railway, and extending into our large body of land, preparatory to making our canals for the drainage of this land. Our canals will be sixty feet wide, and average six feet in depth. There will be thirty-two miles of canals and thirty-two miles of dykes, the entire work amounting to about 2,500,000 cubic yards of excavation. When this work is completed it will throw on the market 87,000 acres of pure muck farms and 28,000 acres of high pine and prairie land, from which can be produced anything that will grow in any part of the South, and to perfection large crops of sugar, rice and tobacco.

"While we have lands along the line of our road and in our main body of land that can be put under cultivation at once, it has been our policy not to seek settlers until our work of drainage is completed, and have, therefore, not offered any, feeling that to be too premature in inducing settlers would create a feeling of dissatisfaction that would always be an injury to this locality, as other localities in Florida, containing good soils, have been injured by the too earnest work of the projectors getting in settlers before the land was ready for them.

"When we are ready for settlers we will notify those who desire to commence farming in the South, and hope at that time to offer them the best soil in Florida at a price that will be within the reach of all."

### **The South's Industrial Progress.**

The industrial progress of the South is the one great incentive that should actuate the people in the development and utilization of its immense resources. These are virtually thus far only partially unearthed. Yet under the impetus thus given in utilizing its ores, coalbeds, oil wells and other resources, giant strides have been taken toward a future of unequalled wealth, power and greatness. Yet the efforts thus far made are but as the zephyrs of the morn as

compared with the propitious trade winds that will send the great ship of advancement spinning forward toward the eventual harbor of full development, where it will reap the profits of a successful voyage.

Already the mighty forces are at work bringing into prominence the unrivaled advantages, the unlimited resources, the salubrity of climate and the golden fertility of soil of this magnificent section that is the garden spot of the world in its undeveloped mines of wealth that will eventually rival all the massive treasures dug from the bowels of the earth. The construction of railways has brought to light the silent wastes that have been untouched by the hand of labor and industry. With these there are flowing into this modern Eden of America capital and population. Under the inspiration of their presence the land is beginning to pulsate with new life. The whirl of the cotton spindle, the blasts of furnaces, the hum and clatter of factories and industries of all kinds, are awakening the solitudes and disturbing the silent forests and busy marts with the buzz of machinery.

Steadily the cotton mills are traveling into the great belt where the fleecy staple is cultivated and gathered. Their open gateways will soon no longer be found hundreds of miles away in the East, but here at home, where the raw material can be carried from the fields, snowy with the staple, into the spindles and looms of the factories, thus adding hundreds of millions to the revenues of the South. So shall her lap be filled with a golden harvest, and instead of pouring forth the riches of her cornucopia into the bosoms of the Eastern and English spinners, she shall gather it in a constantly-increasing treasure of yellow gold, until she shall laugh in the glory, splendor and plenty of her untold wealth.

The industrial progress of the South! This is the magic talisman that is opening the locked gates that shall unfold the hidden treasures that have lain dormant within the bowels of the land in this section, whose bosom the glowing sun has warmed with fervent kisses, and whose riches have been kept concealed from the touch and use of man. Such journals as the Manufacturers' Record are daily and weekly heralding forth these aids to the upbuilding and prosperity of this magnificent Southland. To-day even Shreveport is responding to the



revivifying and magnetic influences of industrial development. A magnificent steel highway is awakening the ambition to secure factories, cotton mills, foundries, planing mills, sash and blind factories and other industries that add to the volume of business and the stir of active life.

These are aids to progress and greatness that need only the lapse of time, patient labor and awaiting to develop into the fruition of the loftiest expectations of those who are up and doing. Human industry, perseverance, effort, are sure of eventual reward, and this city is traveling in the great highway that leads to assured success. Work and wait. The goal is in sight.—Shreveport (La.) Times.

### **Desirable Immigration.**

The unoccupied areas of the South are much greater than those that are peopled. A study of the map of the Southern States and of the census statistics of population will show this fact and save all argument. Assuming that this statement is correct, the question comes up, how can the South secure the increased population it needs, and of the kind it ought to have to increase its prosperity and to develop its unlimited and greatly varied natural resources?

It is conceded by all well informed on the subject that the South has in its white population the most homogeneous community of American citizens in the United States. It is also conceded that the Afro-American population of the South is an important economic element of its well-being. The South has seen, in the Mafia troubles at New Orleans of a few years ago, and in the numerous disturbances that have caused great losses in the North and West during the past two decades, proofs enough that the immigration pouring into this country from Southern and Eastern Europe is not merely a great calamity, but that its continuance will be a serious menace to the perpetuity of those institutions which in the past have given our country its great prosperity.

What immigration, then, does the South need to make it the greatest agricultural, mining and manufacturing section of the United States? Who are the people that can best develop this section of boundless resources by working in co-operation with its present population? Who are the peo-

ple to whom the South will extend the kindest welcome and unite with them to make its wilderness places "blossom as the rose?" These questions carry their own answers. It wants, first of all, native-born Northern men and women, trained in all the economies and thrift of the Commonwealths that have been made great and wealthy because of these hereditary characteristics. It wants the men who know how to so cultivate twenty acres that the net profits annually will be greater than many farmers now get from their work on 100 acres. It wants the brains trained to see the commercial possibilities that abound in its forests and in its natural field, meadow and swamp products, and to put them to use. It needs the skilled artisans whose little shops, employing from five to twenty-five hands, turn out annually in the New England States an aggregate of many millions of dollars of goods. It needs a great influx of the thrifty people of all those States between the St. Lawrence and the Potomac and Ohio, whose annual swarms of young people have largely in the past built up the splendid series of Commonwealths that lie between the great lakes and the Pacific ocean, and have changed what are now Oregon and Washington from an unknown wilderness, "where rolls the Oregon and hears no sound save its own dashings," to Commonwealths that are yearly increasing in population, in wealth, and in all that constitutes a prosperous American State.

Next to these native American immigrants, the South needs the sturdy yeomanry of Great Britain; the cool, slow-moving, but always energetic Hollander; the sturdy, hard-working, God-fearing, self-respecting people of Denmark, Norway and Sweden; the best middle-class folk and peasantry of the many provinces of the German Empire, and the mercurial but industrious sons and daughters of France. The South can welcome all these gladly, for most of these European stocks were represented in the early settlement of these States, and their blood, commingled in their descendants, has made our best Southern manhood and womanhood.

Measures are pending in Congress, in obedience to an almost universal demand from native and naturalized citizens, that will, between now and next March, probably result in some radical restrictions in



our immigration laws, and relieve the country of some of the dangers from this source. If the laws contemplated should, when put in operation, be found inadequate, public opinion will force additional legislation until the desired end shall be attained. The South, therefore, need not concern itself further about this matter than to heartily support all reasonable measures for protecting itself and the remainder of the country from the further incoming of this objectionable and demoralizing immigration.

But how to get to itself the classes of settlers it does need is quite another matter. In last week's issue we showed what efforts Minnesota and other Northwestern States were making to add to their populations, and approved the systematic methods they had adopted to secure desirable settlers. An ardent friend of the South, who has for nearly seventeen years been working zealously and intelligently to induce the Northern and especially the New England people to go South instead of West, and who has been instrumental in sending many desirable settlers and much capital into several Southern States, upon reading our editorial of last week, wrote as follows:

"I thank the Manufacturers' Record for its plain statements of what the people of the Northwest are doing to get settlers. They need them, and they have the right to say the best they can for their section. But the class of immigrants they are after could do so much better in the South that it is a shame that equally systematic measures have not been taken to inform such people of the superior advantages that may be found everywhere in what were once the slave States, and in this connection I hope the Manufacturers' Record will permit me to make this suggestion: There are today in New England at least 50,000 people who would settle in the South if they knew where to go to find the locations they desire. In the States of New York, New Jersey and Pennsylvania there are as many more. They are of the very best native stock. All of them have some means. Very many are well-to-do. Some have wealth, and are seeking opportunities to invest it. In New York city are the foreign consuls of all those European States that furnish the most desirable immigrants. There are also great numbers of naturalized citizens who have acquired some property that

would like to live elsewhere. There is not a day in the year that the metropolis is not visited by thousands of people from all over the Union. What the South should do is to make next year a large exposition in that city of its attractions. It should open the first of October and continue to the first of April. This should be a purely business enterprise, free from all flummery and "show" features. It should be made up entirely of object-lessons for plain people. The thousands that would go to see such an exposition would go to be instructed, not to be amused. They would wish to see the products of the soil, of the forests, of the mines, of the rivers, the sounds and the sea-shore bays and harbors. They would like to know of the physical and climatic conditions of localities, of the religious and educational advantages, of the laws affecting real estate, taxation and such other matters. Transportation facilities by rail and water, water-powers, and all other matters relating to the establishment and maintenance of industries, would command their attention.

"Now why cannot this plan be executed? If the mountain will not go to Mahomet? why not take Mahomet to the mountain? I am sure that such an exposition would have the greatest practical results. The South should be represented at it by its most practical business men, not its eloquent orators or its 'eminent citizens,' but plain-spoken, practical men, whose 'yea, yea,' and 'nay, nay,' would mean much to those they encountered. As soon as it was known that such an exposition was open, that it was an honest representation of the South, it would draw to it more people that meant business than all the local and national expositions in which the South has ever participated, and would advertise the entire section as it has never been advertised before."

So writes our friend, and asks, "What does the Manufacturers' Record think of this suggestion?" We change his question and ask, "What does the South think of it?" Let us know.—Manufacturers' Record.

#### **A New Land Company in Virginia.**

A company to be known as the Southern Farm Land Co. has been chartered at Norfolk, Va. Its object, as stated in the charter, is to buy, lease, improve and sell real



estate in Virginia, North Carolina and other States, especially along the line of the Seaboard Air Line; to foster horticulture and improve agriculture. The principal business office will be in Portsmouth. The names of the officers are: George L. Rhodes, Portsmouth, Va., president; A. B. Farnsworth, New York city, vice-president; W. W. Foltz, Portsmouth, Va., secretary and treasurer, and W. A. Fentress, general counsel. The board of directors are George L. Rhodes, A. B. Farnsworth, V. E. McBee, John H. Sharp, T. J. Anderson, John T. Patrick and E. W. Thompson.

### **Pineapple Shipments.**

A Florida dispatch states that the pineapple crop this year is estimated at between 55,000 and 60,000 crates, or 5000 less than in 1894, which was the largest ever grown in the State. Most of the pineapples are grown along the east coast. The shipping season is now open, and from eight to ten carloads daily are being sent North over the Florida East Coast Line. A pineapple patch will yield on an average about 100 crates per acre. The market price varies from \$3 to \$15 per crate, according to the time at which the fruit reaches market. A number of growers this year have realized \$400 per acre, and have only paid \$100 per acre to raise the crop.

### **For Plant System Employees.**

The recently-inaugurated relief and hospital department of the Plant system is thus described by the Savannah News:

"The relief and hospital department of the Plant system of railroads went into operation yesterday. This department is a new feature with the road, but it is one in which every employe, and there are more than 5000 of them, will take an interest.

"The Plant system has had a hospital at Sanford, Fla., about thirteen years, and is now building hospitals at High Springs and Waycross. It will use the St. Joseph's Infirmary as its hospital here for the present, but will no doubt eventually build one of its own.

"The headquarters of this department will be at Waycross, and Dr. F. H. Caldwell, the chief surgeon of the system, will be at the head of it. This department has advantages both for the system and its employes. In the first place, it insures the sys-

tem in securing sound and able-bodied men, as each man who enters the service of the system from this time on must undergo a thorough medical examination, and must have his name put on the membership rolls of the relief and hospital department. If he cannot pass the examination he will not be taken as an employe.

"The benefits to the employes are twofold. It insures them not only free medical attention and medicine when they are sick, but also pays from fifty cents to \$2.50 per day when sick and disabled. In the second place, it furnishes them cheap life insurance up to \$3000 with the payment of regular dues, which range from \$1 to \$5 per month, according to class of employment or salary, each employe receives a death benefit of \$250 to \$1250, according to the amount of the salary paid him, if he dies a natural death, but in case his death is by accident his family will be paid from \$500 to \$2500 on the same basis, the benefit for an accidental death being twice as great as if the death is a natural one. In addition to this, any employe may increase his insurance up to an amount not exceeding \$3000 by the payment of an additional \$1 per month for each \$1000.

"It is optional with all the present employes of the system whether they become members of the department or not, and they are given until January 1, 1897, to decide. Arrangements have been made for enrolling at once all the employes of the system who wish to become members, and there is no doubt as soon as they are made fully aware of the benefits of the new department practically all of them will have their names enrolled. The system, however, does not leave it optional with new employes. They must become members and must pass the medical examinations before they will be taken into the service.

"In addition to the monthly dues of members, the Plant system will pay into this fund \$12,000 annually in monthly instalments of \$1000 each. In addition to this the system agrees to make good any deficit in the fund that may exist at the end of the fiscal year. If there are any present employes of the system who fail to go into the department by January 1, 1897, they will have to pass the medical examination in case they desire to go in after that date, just the same as new applicants. Up



to, that time they will all be admitted, however, without examination, and irrespective of age or physical condition. New employes over forty-five years old will not be admitted to the relief and hospital department.

"Dr. King Wylly, the local surgeon of the system, will be in charge of the hospital work here. The entire department will be under the direction and control of chief surgeon, Dr. F. H. Caldwell, who will report to General Superintendent Dunham. The department will undoubtedly prove a most important and beneficial feature. It gives all the employes of the system, no matter how large or small their salaries, advantages which they have never had heretofore for the payment of a small monthly sum, and they will no doubt all be glad to become members of this valuable department."

#### **Diversification of Crops.**

The following sound advice to farmers is from the New Orleans Picayune:

"We have all heard the old adage of placing too many eggs in one basket, and in no case is this more applicable than to the farmer who devotes his whole energies to the production of one crop. Our farming community is beginning to realize this, as is evidenced by the increased inquiries as to the adaptability of certain crops to their section. In no section is the farmer's choice in this direction so unlimited as in this southland of ours. The true policy should be the production of possible home supplies, purchasing only those it is impossible to raise, giving in exchange our surplus. A list of the plants that should be included in this diversification is hardly necessary, but the mention of a few may serve to turn the attention of some of our readers to the subject. And first of all, no system of farming is complete without its due pro rata of live-stock, including cattle, sheep, hogs and fowl. They serve a double purpose, as being not only a source of revenue from their sale, but in being the manufacturers of the cheapest and best fertilizer in the world. If we will stock our farm properly we will soon cut down, to a large extent, our fertilizer bill. Again, the introduction of this stock upon our farms will soon force the otherwise unwilling owner to diversify his crops, for he will

soon be confronted with the necessity of feeding those animals. This in its turn will bring attention to the grasses—those friends of ours against whom we have been waging such a bitter war of extermination. There are no finer grass lands in the world, nor does any country possess a greater list of highly nutritious native grasses than we. Add to these a few of the domestic grasses for winter pasturage, and there is no reason why our stock should not be fat all the year round. We cannot pass over this subject without calling attention to some of the statements in regard to alfalfa on our alluvial lands. At a recent meeting of agriculturists it was stated by a gentleman of perfect reliability that he had raised 3000 pounds of pork on one acre of this plant. Another stated that on ten acres he had made enough hay to feed thirty head of mules the entire year and pasture twenty hogs. This plant at the experiment station at Audubon park has given ten cuttings of hay, of over a ton and one-half each, per acre, in one year.

"Another item to which we might pay more attention is poultry, especially chickens. It is estimated that it costs about \$1 a year to feed a hen. This hen should lay at least 200 eggs in that time. It is a well-known fact that there is a ready sale in any of our large cities for fresh eggs at from fifteen to twenty cents per dozen. In fact, we have been told by a prominent hotel-keeper that he would willingly contract for eggs for the whole year at the highest of the above figures, if guaranteed fresh. At the same meeting referred to above it was stated by a gentleman that the products of his poultry-yard were worth from \$4 to \$5 a month to his own table. Without taking into consideration the product from surplus fowls, these facts alone should lead us to give more attention to poultry. The hog is the best boarder a farm can have. He not only pays liberally for his board, but is willing and anxious to gather his food for himself. It has been repeatedly stated in public meetings that pork can be raised in this country for one-half cent a pound gross. This not only proves the hog a liberal boarder, but also proves beyond doubt the ability of our soils to produce an abundance of feed in great variety. In advocating diversification of crops we are frequently met with the argument that



with one or two exceptions there is no sale for our products. While in Lafayette last January we were told that there were thousands of bushels of corn ungathered because of a lack of market, yet the neighboring city of Alexandria has already contracted for hundreds of barrels of meal and carloads of meat, oats, corn and hay for this year. Why is this? Last fall we went to a merchant with a load of corn in the ear and offered to sell to him. His answer was, I do not want it. And as we were receiving this reply his dray came from the steamboat landing loaded with sacks of Kansas and Missouri corn. We returned home with our corn, bought a sheller, shelled it, and sold it to the same merchant at forty cents per bushel the following day.

"With cornmeal selling at \$1.75 to \$2, and hominy at \$3 per barrel, there is no reason for corn to rot in the fields. If the facilities are lacking for converting it into this merchantable form, then let our farmers form a company and erect their own machinery. It is comparatively inexpensive, and a few dollars contributed by each farmer in a neighborhood will create a good market for all its products. Again, nearly all farm products are for feeding animals and man. If hogs can be raised for half a cent, or even two cents, a pound, why is there not a profit in selling them at from four to four and one-half cents? The experiment station has proven beyond doubt that cattle can be fattened rapidly on the ordinary products of a farm. At an expenditure of one and three-quarters cents a pound for the animals, there was a profit in sixty days of over 30 per cent., when they were sold for three cents, and today they are worth four and one-half cents."

## BOOKS AND MAGAZINES.

The July number of the Pocket Magazine, published by Frederick A. Stokes Co., New York, contains stories by Mrs. Burton Harrison, Mary E. Wilkins, Helen Leavenworth Herrick, Hamlin Garland and Elizabeth Pullen, a poem by Eugene Field, and some entertaining bits of news and criticism in its department of Literary Flotsam and Jetsam.

The July number of Harper's Magazine opens with a paper on General Washing-

ton and the period of the Revolution, by Woodrow Wilson. Rarely has a historic personage been made so real and human as Washington here appears, in camp and on the battlefield no less than in the Virginia House of Burgesses or at his Mount Vernon plantation. Mr. Pyle's illustrations of historic scenes worthily accompany Professor Wilson's admirable studies of colonial life and politics.

The McDowell Fashion Journals are unusually attractive this month. The Paris Album of Fashion has been consolidated with the La Mode de Paris and La Mode with the French Dressmaker, thus forming in either instance a very powerful combination of novelties. The price of La Mode de Paris and Paris Album of Fashion united remains the same, viz, thirty-five cents a copy or \$3.50 a year. The price of the French Dressmaker, which includes La Mode, is thirty cents a copy or \$3 a year.

The Atlantic Monthly, which begins a new volume with the July number, securely holds its own place as the foremost of our periodicals in its literary quality, and it shows also a firm and ready grasp on the important topics of the time. This number treats of the timely subjects in International Politics, Democratic Tendencies, Science, Literary Methods, Fiction, Criticism, Literary Reminiscences and Suggestions, and Education, with an unusual variety of minor topics.

The Review of Reviews for July is a strong political number. The portraits of prominent men of all shades of politics are numerous and interesting, and the editorial comment on the present situation is luminous. The Review is the only monthly which is able to keep fully abreast of all political movements and changes. It is never caught napping. The action of the St. Louis Convention on the 18th of June is already history to the Review of Reviews which appears on the first day of July; indeed, that action had been definitely and accurately predicted in the number of the month previous. The Review has shown such possibilities in political magazine journalism as had not been dreamed of in the philosophies of the magazine editor of the conventional type.



# THE SOUTHERN STATES.

AUGUST, 1896.

## NUT CULTURE IN THE SOUTH.

In view of the possible profitableness of pecan-growing in the South, as shown in an article published in the "Southern States" for July, it is asked very pertinently, "Why should the South not give large attention to nut culture in general?"

The cultivation of nut trees other than the pecan has not become an established pursuit of any magnitude in any part of the South, but it is receiving the attention of enterprising and progressive experimenters here and there, and seems likely to become in time an important industry. In the report of the Secretary of Agriculture for 1889 it was said that "Nut culture is assuming more importance as an industry in this country than formerly; in fact, until recently it has scarcely been attempted."

In the Secretary's report for 1891 the pomologist of the Agricultural Department wrote:

"Our native nuts are rarely found in cultivation, but the interest in nut culture is growing, and especially in the pecan, which is probably the best of all nuts, either native or foreign, which are found in our markets. The improved varieties of this nut were mentioned in my report of last year. In California there is a lively interest in the culture of the Persian walnut. This nut has often been incorrectly called 'English walnut' and 'Madeira nut,' but recent investigations prove the name 'Persian' to be the correct one. All over the country there is a slight interest in the culture of foreign chestnuts, but there is great need of more extensive plantings. Our markets are poorly supplied, and the price is, there-

fore, high for these and other nuts which should become a common article of food here as in Southern Europe. Already a much larger import trade is carried on than our farmers should permit, and we trust that the tide of trade in nuts will in time be turned the other way, as is now the case with raisins, oranges and canned fruits."

The ordinary farmer is likely to scoff at the idea of raising nut trees for their fruit, just as twenty-five years ago his father would have ridiculed the suggestion that he should raise "garden truck" for market along with his corn, wheat and oats. But it is not improbable that the next generation will see as great a development relatively in nut culture as the present generation has seen in truck farming and fruit growing. On this point there are some interesting paragraphs in a recently-issued bulletin (No. 36) of the Pennsylvania State College Agricultural Experiment Station.

"Many of our cultivated fruits," says the writer, "have come to us from the Old World, where they have been under cultivation so long a time that the place and circumstances of their origin are entirely unknown. Some others are derived from American species, and are so plainly related to the wild native fruits that their transformation under careful cultivation and selection can be very clearly traced step by step.

"There are certain native fruits, however, which, until recently, attracted very little attention as of possible value under cultivation. These are the various nuts, such as the chestnut, hickory-nut and walnut.



This is perhaps accounted for by the great ease with which the ordinary fleshy fruits are produced, their general profuse productiveness and the agreeable contrast in food supply which they present to the staple articles of diet. Moreover, the spontaneous yield of the nut trees has seemed to be ample for all needs, and they have always appeared to be rather intractable subjects when brought under cultivation and to require a good deal of time before coming into bearing. It is, however, necessary to take but a brief retrospect of fruit culture in general to see how completely ideas of its feasibility and profitableness have changed within the past twenty-five years.

"Middle-aged men readily remember when there was no such thing as small-fruit culture in the United States, except as people supplied their own tables from a few plants in their gardens. Small fruits were not raised to sell, for it was thought neither feasible nor profitable to do so.

"With changed conditions of ease of transportation, systematic methods of culture, etc., a great industry has arisen, which involves thousands of men and a great capital to keep it in operation. From being a small business, carried on, perhaps, as a temporary makeshift, or in connection with other kinds, it has grown to be the chief occupation in many localities, and has even invaded districts long wedded to the production of certain staples only, and has materially changed their agriculture. In the diversification of industries which is now deservedly attracting so much thought and attention, the increase of our plants of cultivation should find a place, and of cultivated plants the nut-producing trees are among the most promising. The nut trees differ very much in certain particulars from other trees which produce edible fruits. They are of the first rank as to size, and the fruit is the true seed only, and is not made up of the fleshy coverings of the seed, as in the apple, peach, etc. Nuts have, therefore, much less water and a higher nutritive value generally. They are rather of the nature of staple ar-

ticles of diet, and approach the grains in food value. They are, moreover, not of the perishable class, and are easily handled, with little waste and risk."

The thirteenth annual report of the North Carolina Horticultural Society contains a paper on the orchard culture of nuts, from which the following is taken:

"The subject of nut culture is a new one to most American fruit growers. Until recently our almost boundless forests, rich in nut-bearing species, have yielded a supply sufficient for the demands of our markets. The river bottoms of Louisiana and Texas have yielded their tribute of pecans; the valleys of more northern States have supplied an abundance of black walnuts and butternuts; the forests of Appalachian ridges have furnished toothsome chestnuts, which have found sale at prices usually profitable to the collector. While the shagbarks of New England and the Central States have long been stable commodities in city markets, none of these have been planted or cultivated for their nuts until recently, because of the belief that their culture could not be made profitable.

"But the progress of our impetuous civilization has gradually worked a change in forest conditions. The axe has given way to the saw mill, and the fire from the burning log-heap has not ceased its destruction at the line-fence of the settler. Our forest area is rapidly diminishing, and the area of the nut-bearing trees decreases at even a faster rate, because of the greater value of the timber of most of the nut-bearing species. The near future is sure to witness a change in the source of the supply of nuts now demanded by our city markets similar to that which has been witnessed in regard to our small fruits, i. e., the wild nuts will be replaced by the larger, finer and in every way superior products of cultivated plantations.

"From the fact that choice nuts can be shipped for long distances, it is probable that the nut culture of the future will become localized, both as regards species and varieties. Certain



localities will be found to produce a superior product of the pecan, the walnut, the chestnut, the hazel and the shellbark, and the production of those particular types will become specialties in those localities. This tendency is already strongly marked in California, where, after a quarter of a century of somewhat indiscriminate planting, it has been found that the Persian walnut (*Juglans regia*) and the almond cannot be profitably grown in the same climates, but succeed admirably in regions not widely separated.

"It is therefore of the utmost importance that planters study their conditions and select species suitable to their localities before embarking in nut culture on an extensive scale. As in all fruit culture, only careful experiment can settle uncertain points."

As previously stated, nut culture (except as to the pecan) has not yet become an industry of much importance in the South. In Louisiana, however, a fine beginning has been made in the cultivation of the English walnut, as it is commonly called. According to the last census, there were in Louisiana in 1889, 4391 bearing and 14,859 non-bearing trees. The yield of nuts in 1889 was 163,800 pounds, an average of 1800 pounds per acre of bearing trees (ninety-one acres), which, at nine cents a pound, brought \$14,742, or \$162 per acre. It is probably safe to assume that there are now not less than 10,000 bearing trees in the State. The nut yield reported for the year 1889 was mostly from young trees. The product increases every year for many years after the tree comes into bearing. In California, for example, where the walnut has been cultivated for years, and where the bearing trees had a much greater average age than in Louisiana, the yield for 1889 is stated in the census report to have been 3600 pounds per acre, making a revenue, at nine cents a pound, of \$324 an acre. California had, in 1889, 184,018 bearing and 396,254 non-bearing trees. The value of the California crop of 1889 was \$1,242,216. California and Louisiana are the only States noted in the census re-

port as producing this nut. It would seem to be amply demonstrated, however, that there are large areas in nearly all the Southern States admirably suited to it. In the yards of many of the old-time homes of the South there may be seen trees forty, fifty, sixty years old and over, and a number of Southern horticulturists have in the last few years found by experiment that this nut may be profitably grown. Mr. W. A. Taylor, assistant pomologist of the United States Department of Agriculture, says in a recent article:

"This species (*Juglans regia*), which is quite commonly known under the names English walnut and Madeira nut, has long been experimentally planted in our Eastern States. Occasional trees about the older cities of the Eastern States succeed so well that there is encouragement for further effort with the improved varieties known to be of superior hardness and productiveness. It should be thoroughly tested in those portions of North Carolina where the combination of good soil, mild climate and freedom from late and early frosts is found—notably in the thermal belts of the southwest portion of the State. In California this nut is largely grown from seed, though it is easily budded and grafted upon seedlings of its own species and upon the native California walnut. It could probably be successfully worked by annular budding on small trees of the black walnut just as the sap is starting in the spring. The varieties which have proved hardiest and most productive thus far are of comparatively recent introduction from France. They are the Chaberte, Franquette, Mayette and Praeparturiens, the last-named being the best known and most widely disseminated of the type. It is a nut of but medium size, but so precocious and regularly productive as to make up in quantity what the individual nuts lack in size. A few trees of each of these should be planted in every locality where conditions are favorable. It is probable that at least one of the Japanese walnuts (*Juglans sieboldiana*) recently in-



roduced will be found suited to conditions where the Persian walnut succeeds, but it has not as yet been fruited in the Eastern United States."

Next to the pecan, the chestnut is being more widely experimented with now than any other nut. The United States Department of Agriculture has given considerable attention to it, and in the annual report of the Secretary of Agriculture for 1889 the pomologist wrote as follows of it:

"Among the native nuts there are perhaps none of more importance than the chestnut. It grows naturally over a large part of the United States, beginning with Kentucky and Ohio, reaching northeast to the boundary and eastward to the Atlantic ocean. The wild nut is exceedingly rich in flavor and very sweet. In these respects it is superior to the European or Asiatic strains. Moreover, our native chestnut seems to thrive much better than the foreign varieties, but in the size of nuts the latter have the advantage. A number of varieties of our American species, *Castanea Vesca*, have been brought to notice, and are now propagated by grafting and budding, showing signs of a decided improvement as compared with the ordinary kinds found in the forests.

"There are in Pennsylvania, Maryland, Virginia, Ohio, Kentucky, Eastern Tennessee and the mountain regions of the Carolinas and Northern Georgia, and all that part of our country lying northward of the States named (except in Northern New York and a part of the New England States, where the climate is not suitable), large tracts of lands now yielding small returns which might be profitable if planted to chestnuts. Many old wornout fields, which are practically worthless in their present condition, might be thus turned to good account. The timber would be commercially valuable, but the nuts would bring much larger returns to the owner. Once started and cultivated for a few years until they begin to shade the ground, the trees would require very little further attention except to thin them out. As an article of

food, the chestnut is very valuable, but at present the prices are very high. Even the common nuts from ungrafted trees would repay the use of the land, but it would be much better to plant only grafted trees of the choicer varieties.

"In my report for 1887 directions were given for budding and grafting the nut trees, which is a rather difficult thing to do, but with proper care a reasonable degree of success may be attained.

"Perhaps the most valuable variety yet introduced is the Paragon, which was brought into public notice by H. M. Engle & Sons, of Marietta, Pa. It is possible that this variety may have some foreign stock in it, as the leaves differ slightly from those of our native species, but the trees seem to be very thrifty, and have successfully withstood the winters of the last fourteen years in Pennsylvania. Mr. Engle informs me that he 'obtained it from a few scions received from an amateur horticulturist (now deceased) in Philadelphia, and never learned where the horticulturist got the stock;' hence the origin is unknown. It has perhaps not been disseminated except through the firm now handling it. The tree bears abundantly and at an early age. The nuts are very large, averaging nearly an ounce in weight.

"A variety named Dupont has been received from Delaware, and is a pure native seedling without doubt. The original tree, near Dover, Del., is said to have borne from \$30 to \$40 worth of nuts annually for years past, but within the last year or two the rose bug has partially destroyed its blooms. The nut is almost as large as the Paragon and fully equal to it in flavor."

The same writer said in the annual report for the following year:

"In my report last year I mentioned this nut and gave an illustration of Paragon, a chestnut which was brought to notice by H. M. Engle, of Marietta, Pa. I then thought it might be partly of foreign stock, and now am sure that it is nearly or entirely so. It is better in quality than the other varieties I have tested of either



European or Asiatic parentage, but it is now quite well established that W. L. Shaeffer, of Philadelphia, planted a European nut from which the original tree of this variety came. The same may be said of a variety mentioned in my report of last year under the name Dupont, which is a Delaware seedling from a foreign nut. Recent investigations prove that its true name is Ridgley, and that Dupont is only a synonym. There are a number of very large varieties of foreign chestnuts in the hands of Samuel C. Moon, of Morrisville, Pa., and William Parry, of Parry, N. J., who both sent me samples this year. It is, however, my belief that we should look chiefly to our native species for the choicest kinds, although not the largest.

"During the investigations of this year there have been found a number of very large varieties and some very early in ripening. In due time they will be brought to public notice and full information will be given about them."

Mr. W. A. Taylor, of the Department of Agriculture, says of this nut:

"Because of their large size, the Spanish and Japanese chestnuts find ready sale in our markets at good prices. Neither of them is equal to our native chestnut in flavor, but considerable quantities are imported and sold by roasters from stands on our city streets. They sell for about twice as much as our native varieties. Of the two species, the Spanish is of better quality than the Japanese, though the latter is the larger nut and the tree comes sooner into bearing. Both can be quite easily grafted on the American chestnut, either by cleft grafting at the crown or by whip-grafting the top or branches. They will probably succeed wherever the native chestnut thrives, and are, therefore, suited to the higher portions of the State, including the ridges of the Piedmont and mountain regions. For the present, their planting should be confined to experimental plots, as it is highly probable that American varieties of these species will soon be developed which will supersede them in our mar-

kets. Two such have already come to notice, both of the Spanish type—the Paragon and Ridgley. The Paragon originated in Germantown, Philadelphia, and is a large nut, of good quality. The Ridgley, of which the original tree stands near Dover, Del., is a little smaller, but is reported to be very productive and of good quality. A variety that will yield nuts as large as the Paragon, and equal to our native chestnut in quality, is the desideratum of our nut-growers now. The originator or discoverer of such a tree has both honor and financial recompense awaiting him.

"Of the imported European varieties, Numbo has proved most valuable thus far, enduring the winters and yielding good crops of large nuts in Eastern Pennsylvania. The best Japanese varieties yet tested are the Giant, Early Prolific and Superb—all large nuts."

And here are some extracts from the bulletin of the Pennsylvania State College Agricultural Experiment Station, heretofore referred to:

"While all of the nut trees are probably capable of improvement, and each has adaptation to its particular situation, the one most promising in this latitude is the chestnut. \* \* \*

"Many districts in which the trees are abundant derive a respectable income from the sale of the nuts, and it is obvious that this is an industry which can be made far more productive and profitable than it now is, since very little effort has been made toward cultivation. Only the natural, spontaneous product has been gathered. \* \*

"A few acres on each farm planted to chestnuts would entail no great expense or labor, and would at least renew the wooded covering which protects the surface from washing, holds the leaves and vegetable debris and gradually accumulates humus to enrich the soil. Few trees are more useful to the farmer in furnishing posts and other materials for farm uses; and with proper care in thinning, trimming and protecting, they would in time become bearing trees—a chestnut orchard, as reliable a source of in-



come as an orchard of any kind of fruit. \* \* \*

"It goes without saying that chestnuts are salable, and that the market has never yet been overstocked. Indeed, the market is generally quickly sold out, and this in spite of the fact that they are not perishable by any means and there is no need of forcing their sale. \* \* \*

"Altogether there are several reasons why the growing of chestnuts is well worthy the attention of anyone who has the facilities for it."

The same authority furnishes the following general information on chestnut culture:

"The chestnut is a native of the Eastern United States, particularly the mountainous parts, where in the higher and drier soils it is one of the most common as it is one of the most useful of our trees. It is not as widespread as many others, and is somewhat limited by soil conditions as well as by latitude. It is not a tree of wet or heavy soils, nor can it be grown successfully in them. Apparently it succeeds but poorly in limestone land, but whether from the lime which it contains, or because of its heavy clayey character, is not known. But in gravelly soils, such as are common and extensive in hilly districts, it grows luxuriantly, becomes well developed and productive. The localities in which it can be satisfactorily grown are hence quite readily determined. To some extent it can and has been grown in places where it is not native, and in soils not of light and gravelly nature, but generally imperfectly and with difficulty, and the trees have been sterile, or at least irregular and uncertain in fruiting. It has been noticed that near the borders of the area in which this tree is native it is quite liable to be barren and to attain a meagre size and development. To avoid disappointment one should satisfy himself that both climate and soil conditions are favorable before attempting chestnut culture.

"The chestnut grows naturally from the seed or nut, and also reproduces itself indefinitely by sprouts from the base of the trunk. This second meth-

od is very common, particularly in newly-cleared land, and makes more easy and rapid the renewal of these trees than of those kinds which grow from the seed alone.

"In growth from the seed it is found that the nuts lose their vitality in a remarkably short time, and hence special care must be taken either to plant them very soon after they are gathered, or else to keep them so protected that their vitality is not impaired. Loss of vitality is practically coincident with loss of moisture, and nuts once dried will not germinate, while those partially dried will be more or less uncertain in their germinative powers. Nine-tenths of all failures in the germination of this and many other seeds usually comes from drying or the inability of the seed to procure sufficient moisture during germination. Nuts intended for planting should be kept buried in soil, or, better still, coarse saw dust or litter, slightly moist, until they can be planted. If possible, nuts should be planted where the trees are to stand. The seedling is characterized by a remarkably long and vigorous tap-root. It much exceeds the stem in both length and thickness. If allowed to grow without removal there is no check on growth; if transplanted it is impossible to avoid some mutilation of the roots, generally a loss of a considerable part of the tap-root, and experience shows that in the chestnut tree this is more of an interference, and requires more time to recover from than in any of our common fruit trees, to say nothing of the occasional loss of a tree, which transplanting always involves. \* \* \*

"The fruiting of the chestnut does not ordinarily occur until the tree has become at least ten or twelve years old, and when they are crowded not until much later, and then sparingly only on its uppermost branches. Low, round-headed trees, having ample room for development, are the only ones which bear early and liberally. \* \* \* The nuts are comparatively uniform in size, but vary greatly in abundance and perfection in different years. Imper-



fect fertilization and insect injury are the chief causes of this.

"Our native chestnut is but little variable in any respect, and has given us scarcely any varieties, the history of which is known, or which are plainly distinguished from the type.

"The European chestnut, however, has not only a marked natural peculiarity in the greater size of its nuts, but has given rise to varieties which are much superior to the wild type, and are highly valued by cultivators. Over thirty have been named, and the common species are said to be but little used, except as stock upon which to work the others. The varieties in most frequent cultivation are esteemed for the superior quality of their fruit more than for any other reason. The trees do not grow so large as the American, and come into bearing more quickly.

"Within the past few years species from Japan have been introduced into the United States. Unfortunately, they do not appear to be entirely hardy on their own roots, except in the South and some favored districts in the Middle States. They are quite dwarf in habit, produce nuts larger even than the European, and begin to fruit when they are but four or five years old.

"These two characters, of small size and early fruitfulness, give them special value, and if they can be worked upon stocks of the American species, we can secure trees which will bear earlier and produce larger nuts than our native species. It would seem possible, also, by hybridizing, to combine the hardiness, vigor and quality of the American species with the larger size of fruit and precocious bearing of the foreign sorts. The nuts of the latter, despite their large size, are not of the best quality. They lack sweetness, and the skin is often quite bitter and astringent; but as this is easily removed, and boiling makes the meat more palatable, this method of preparation is commonly employed in foreign countries where chestnuts have long been a favorite article of food. In this country we have never looked upon them in just that light, although a

great many bushels are used every year, and the supply never equals the demand. \* \* \*

"In raising chestnut trees from the seed special care and pains should be taken to secure fresh nuts which have not had time to become dry, or have been carefully packed so as to preserve their moisture. It is surprising how quickly they lose moisture in a warm and dry atmosphere, and, as loss of moisture means loss of germinative power, too great pains can scarcely be taken with nuts intended for seed. They may be planted in the fall, or buried in the ground until spring and then planted. The former is generally the better plan. The objection commonly raised to fall planting is the danger that the nuts will be destroyed by burrowing animals. This should be anticipated by planting at least twice as many as the number of trees desired. It may be doubted whether spring-planted nuts are not fully as liable to destruction by this means as are any other.

"Care should be taken that they are not carelessly put so deep that the stem finds difficulty in getting into the air, nor so poorly covered that they will dry out before germination. The use of the foot in seed sowing to press the ground about the nut should be carefully observed. On rough, stony ground, containing roots of various shrubs, all the operations of planting are more tedious than in other situations, but success cannot be had without proper observance of them. Very bushy land must be cut and burned over before planting. It must not be supposed that because the chestnut is a forest tree it will grow anywhere. After it is once thoroughly established it will hold its own, but in order to get a start and foothold it must have much the same help and protection which are given to any cultivated plant. The seedling must have light and air, and will not thrive in the shade, nor when crowded by sprout-growth or other vegetation. Transplanting seedling trees can, of course, be done, but so far as our experience goes it is always attended by a check on growth and vig-



or which last two years or more, and they are easily outstripped by the others. \* \* \*

"Where there is a natural sprout-growth of chestnut on land which is often abandoned and left to run to waste, there is an excellent opportunity for securing an orchard of nut trees at a very small expense and trouble. The chestnut sprouts should be thinned out gradually until they are so far apart that they will not interfere with one another. Trees so exposed will develop short trunks and low, round-headed tops, and will come into bearing much sooner than otherwise. The trees and shrubs of other kinds should meanwhile be cut periodically, at least in so far as they directly interfere with the symmetrical development of the chestnuts, so that the latter will eventually occupy the whole ground. \* \* \* In effect, this is but giving a little attention to the second growth, which appears after every cutting of chestnut land, and thus turning its energy into a particular channel. When the small amount of labor necessary to do this is considered, it is surprising that more do not undertake it. It will be necessary to afford some protection from fire and trespassers, but what reasons can be given for not protecting and enforcing the rights on property of this kind as on any other?

"But such sprout-growths can be treated in another way. If taken when they are still young and small they can be grafted with scions of any of the named varieties which are now offered by nurserymen.

"The advantages of this method are so great, and it can be so easily applied in many localities where this tree is common, that a description of what has been done will be the readiest means of understanding and appreciating it, and a guide for those who wish to undertake it.

"Along the west side of the Susquehanna river, in York county, Pennsylvania, opposite Marietta, runs a low, rough mountain ridge of quartz rock, which is the hardest and least easily disintegrated of all rock materials.

Where it has been cleared of brush and tree growth the surface is strewn with boulders broken off of the parent ledge. Soil can scarcely be said to exist. At best there is but a gravelly surface, with here and there the loose rocks in profusion. To look at a cleared portion of it one might very naturally suppose that nothing whatever could grow upon it. Nevertheless there has been a quite liberal tree growth here, chiefly of rock oak and chestnut, and it is evident that the hillside is fit for nothing else. It has been cut over at least once, quite likely twice, and allowed to grow up to sprouts again. While chestnut was the dominant growth it was so thick and crowded that the trees never amounted to anything as nut-producers. The wood was useful for posts and rails, but the owner, Mr. Engle, says he never thought it worth while to attempt to gather the few scattered nuts which they produced. About sixteen years ago he received from Mr. William L. Schaeffer, of Philadelphia, grafts of a variety of chestnut called the 'Great American,' since it was thought to be a large fruited form of the native American species. These grafts were set in trees growing in his door-yard, and have now made beautiful, low, round-headed specimens strikingly like the apple tree in general appearance. They grew rapidly and bore almost every year. Soon they called attention to the superior character of the variety, and suggested the experiment of grafting on the young sprouts upon the hillside across the river. Accordingly the native growth was cleared away, a few acres each year, and, after a year from cutting, when the young sprouts had sprung up about each stump, the process of grafting began. The sprouts were thinned out freely, so that those remaining should be as uniformly spaced as possible. These were then grafted with scions supplied from the few door-yard trees first worked. The process of grafting did not differ materially from that long employed in the propagation of the apple and other familiar fruits, but rather seems to correspond



so closely to it that anyone who can graft the apple can graft equally well the chestnut, although it is probable that the percentage of successful grafts with the latter will always be somewhat smaller. Care must be taken to have both stock and scion in good condition. The scion, particularly, should be dormant, and yet plump and ready to quicken and start into active growth so soon as the current between stock and graft is established. Particular time, early or late in the spring, does not seem to be essential so long as the scions are in this satisfactory condition. But, considering how easily they become impaired as the warm and sometimes dry weather of spring arrives, I much incline to favor early grafting. I have had the best success with the early set grafts. Mr. Engle, however, is inclined to pay little attention to time and to do the work when it is most convenient.

"Neither does there seem to be much choice in the kind of grafting employed, excepting as that is determined by the size of the stock. In general, preference has been given to whip or tongue grafting the sprouts which are half an inch or thereabouts in diameter. This is a more rapid method than cleft grafting, and by it a closer contact with the stock can be obtained, and the grafts are less easily displaced. Should the graft fail to grow, cleft grafting the succeeding year will often be required on account of the increased size which the sprouts have reached. Grafts should be set up two or three feet from the ground; even then the tendency is to make low and broad tops. Sometimes the union is imperfect, and a knob or irregular swelling shows where the grafting was done. But more commonly no distinct mark was left after two or three years' time, and in many trees it was impossible to distinguish where the union had taken place. The details of such simple grafting as this it is assumed the reader is already familiar with. \* \* \*

"Occasional grafts which have contained fruit buds have knit so quickly as to have brought forth their flowers

and even produced fruit in the first year. But this is very exceptional, and moreover is not desired. More commonly there has been fruiting the second year, but this also is no real advantage and is not encouraged. With the third year bearing becomes quite common, and from this on regularly increasing crops are the rule. Indeed, the trees are apt to set more fruit than they can carry and mature, and Mr. Engle's practice has been to thin them as soon as the burs are so fully formed that they foreshadow the probable crop. This is necessary to prevent the branches from being broken, if for no other reason. The nuts, it should be remembered, are three to four times as large as the native species, and the burs are correspondingly heavy. This precocity of the grafted trees (for the native seldom bears before it is ten to fifteen years old) is perhaps even more pronounced than in our common domesticated fruits, and is of itself sufficient to show a great advantage in the practice of grafting. Because of it some return is had in three years from the time of doing the main part of the work, or four years from that of cutting the trees whose sprouts served as stocks. The oldest trees on the hillside referred to are now six years grafted. About twenty-five acres have been worked over, or will have been before the current year expires; about three-fourths of this are in moderate bearing. They are all of the one variety, now called 'Paragon,' since it is not a pure native American, as was thought when the first name was applied. It has certain excellent characters, which have been confirmed by twelve or more years during which it has been fruited. They are regularity of bearing, seldom missing a year; large size, fair to good quality (they hardly equal the native nut in sweetness, though they come very close to it), and a holding in the bur even after they were fully ripe and it has opened wide. This last quality is of considerable advantage in gathering on rough, rocky ground, where many nuts would be lost if they shelled out easily and fell among the undergrowth or into



the rock crevices. The burs can be removed from the trees, taken to a smooth 'floor,' where the nuts can be separated at leisure. In addition to early fruitfulness, grafting produces nuts of a known variety, and hence uniform size and quality. Nut culture thus becomes reduced to a system, and is no longer the hit or miss matter of the wild tree. It seems quite probable moreover from the experience of a number of others that this particular variety is not any better adapted to propagation by grafting than are other kinds, and that even the Asiatic or Japan varieties may by grafting become entirely hardy and productive also. These latter bear nuts of still larger size, but are liable to be quite deficient in quality. They vary, however, greatly among themselves, and now that they are being grafted so commonly we shall doubtless soon have these differences in quality brought out and so well known that the name chestnut will of itself be no more distinctive or expressive than is the word apple,

when unaccompanied by the qualifying variety name like Baldwin or Rambo. \* \* \*

"These larger grafted nuts are particularly attractive, since the average customer will pick out the big ones every time, and the size of the fruit outweighs every other consideration.

"Altogether there are several reasons why the growing of chestnuts is well worthy the attention of anyone who has the facilities for it. The facilities for the growing of chestnuts are a light, sandy or gravelly soil, which is dry or easily drained, or, better still, a natural chestnut coppice on land the rougher the better, since it can be utilized very fully by grafting after the manner described. There is a great deal of such land. It is safe to say that it often does not pay its taxes. The same energy and care here put into the creation of a chestnut orchard that is given to one of apples would seem to be entirely feasible and the most promising means of making such land productive."

## NORTHERN FRUIT DEALERS VISIT GEORGIA.

Early in July a number of prominent persons, mostly fruit dealers from New England and elsewhere, went South for a visit to the great peach belt of Georgia at the invitation of Mr. J. H. Hale, the Connecticut horticulturist, who owns one of the largest and finest of the Georgia peach orchards.

Two of the members of the party have favored the "Southern States" with accounts of what they saw and the impressions gained on the trip. Their letters are given below:

From

Hon. J. M. Hubbard,  
Middletown, Conn.

The editor of the "Southern States" requests an account of my observations in the South on the occasion of

my recent trip to Georgia with the party which accompanied Mr. Hale and made his fruit plantation in that State its objective point.

It should be remarked that the trip was a very hurried one, the observations made necessarily superficial, and the resultant impressions ought, therefore, to be held subject to correction on many points as a more thorough study of the situation may indicate.

On one point, however, there is no possibility of mistake, and that is the warm and generous hospitality of the Southern people. It seems to pervade all ranks and conditions, and crops out even in the management of what we are accustomed to speak of as "soulless corporations," as well as in



the home life of the people. It enveloped us simultaneously with the first warm breath of Southern air, and we did not escape from it so long as we remained in the region distinctively known as the South. To the other elements of interest in the trip this adds the crown and makes the whole perfect and complete.

Most of the gentlemen comprising the party viewed what they saw from the standpoint of dealers, and their impressions would be apt to relate to the matter of distribution rather than production. My own occupation is that of the farmer, and the productive aspects of what we saw naturally interested me most.

And I do not think even a hurried inspection of the South can be mistaken in the observation that its capacity for agricultural and horticultural production is varied and immense.

It is immense for one reason, because it is varied.

There can be no doubt but what the South has suffered greatly in the past, and lagged somewhat behind in the march of development, because of the habit of her people, which has led them to confine their productions to a very few great staples.

Such a policy inevitably leaves a large proportion of the productive capacity of soil and climate untouched and inactive. It also leaves inactive and untouched a large share of the energy and skill of the population, which a varied production would awaken and bring into active operation. This last consideration may seem fanciful to some, but it really is of the greatest importance.

Right in the same family, among children of one father and one mother, will often be found a great diversity of talent and aptitude, and unless each finds the occupation which interests and fits him, and calls his best energies into exercise, the force and capacity for service locked up in his nature will be largely wasted.

To enable each to find his right place and work the choices which are spread out before him must be many

and varied, and thus through the two modes of action indicated by concentration on the part of the individual, and largely varied production in the community, will the best results for both be obtained.

It is a happy omen for the South that she is entering upon a career of varied production. On the road from Savannah to Macon we entered the region of red subsoil, and we did not leave it until well-nigh or quite through both the Carolinas on the way home. Just what its limits are I do not know, but it must characterize a wide area of territory in the South.

Its constitution and the resources of fertility which it contains must furnish an interesting subject for investigation, inasmuch as all soils not alluvial are built out of their subsoils. At first sight we called this subsoil a clay, but Mr. Hale informed us that the clayey element in it was very slight indeed, and we soon saw by its propensity to gully in heavy rains that this must be so. In places where the surface soil had been by any agency entirely removed the subsoil seemed very barren, but the bountiful crops upon fields where it was covered by a thin layer of loam strongly inclined the observer to think that some portion of their support was drawn from the underlying strata.

A Yankee would be apt to test the quality of this subsoil by sending his plow down into it, though perhaps he might find out that he had better have let it alone.

I have written "bountiful crops," but that phrase needs some qualification. Not all the crops observed are bountiful. Some of them, of corn and oats especially, would not be satisfactory to a Northern farmer, as he could not see in them compensation for the labor cost of production, to say nothing of any profit.

This, however, leads me to an observation made at second hand, and that is that the labor cost of producing a crop is much less at the South than at the North.

A friend of mine who employs labor in both sections tells me that the



Southern people don't begin to appreciate the advantage they have in the possession of a labor supply which is cheap, contented and efficient. He declares that he can accomplish equivalent results at the South for little more than half what they would cost at the North.

Recurring for a moment to the matter of diversity of production, the growth of the manufacturing interest observed in Northern Georgia and the Carolinas is one of the most hopeful indications for the future to be seen in the South. It is hopeful, not only because of the direct addition it makes to the wealth of that region, but because of the home market thus furnished for its varied agricultural productions.

There is no other market which will compare in value to the producer with the home market.

New England agriculture labors under many adverse conditions, but is saved from practical extinction by the home market supplied by her manufacturing population and everywhere accessible.

The attractiveness of many Southern landscapes remains strongly impressed upon my memory. All through Northern Georgia, the Carolinas and Virginia a panorama of beauty was continually being unrolled before the eyes that watched from the car windows. Sometimes an undulating country stretched away to the horizon, written all over with promises of plenty and peace. Sometimes a mountain background rose up as a setting for the picture, bringing in the element of grandeur to complete the combination. No one need wonder that those who live in the South love their homes with passionate devotion.

But it must not be considered that this party of Northern men who looked upon the attractions of the South with appreciative eyes were for that reason at all inclined to disparage or undervalue their own section. Undoubtedly their thought of the richness and beauty of our whole country was greatly enlarged and stimulated. They had tested the North, and knew

that it was a good land. They have looked upon the South, and seen that it is fair and rich in promise. North and South together form an aggregation of resource and attraction found nowhere else on earth. In this wealth we are all sharers.

Somewhere in the broad sweep of this country of ours there is a place and a work and a reward for everyone. It is probable that in the South more than in any other section of our country there are to be found vacant places and unclaimed rewards. But this condition of affairs cannot continue. Our whole land is becoming known to our whole people as never before, and in the not distant future there are to be no neglected localities of large extent.

Our whole country is to be built up in beauty and strength, and we are all of us to be glad and grateful for the fact that all are citizens of the United States of America.

From

J. Horace McFarland,  
Harrisburg, Pa.

As one of the party of Northern fruit and tree men who recently made a hurried trip into the Georgia peach-growing section, I am glad to accede to the request of the editor of the "Southern States" for a few words on the country.

It was not my first trip, the same region having been visited in 1892. I can, therefore, fully appreciate the very great improvement of conditions that I see now. The touch of progress seems to have been felt in all directions; not only are the railroads greatly improved in every respect, but the country seems to be gaining wonderfully in manufactures. The increase in the number of cotton mills, for instance, points to the fact that the East will not long enjoy her supremacy in making cotton cloth. Surely, it is a proper thing that this great staple should be worked up as nearly as possible at the productive points.

Of the fruit planting—to see which was particularly the object of our visit—it is difficult to speak without enthusiasm. Our party spent one night

in sleeping-cars directly in the heart of the great peach orchard of the Hale Georgia Orchard Co., near Fort Valley. It was a novel experience, and one long to be remembered, to thus rest in the midst of a mile and one-quarter square of bearing peach trees. As we mounted to the observatory on Mr. Hale's packing-house, and the peach horizon spread away from us in every direction, the view was a most inspiring one.

Our party was composed altogether of practical men, who, while not unmindful of the delights of the trip and the beauty of the scenery, were yet anxious to see whether the claims that had been made for Georgia fruit were to be substantiated. I think all were more than satisfied, especially with the crop in the Hale orchards, where everything that care and skill can compass has been done not only to produce fair fruit in great abundance, but to send it North in the shape most attractive to the buyer. The great orchard of the Albaugh Orchard Co., adjoining Mr. Hale's plantation, and the important enterprises of other Ohio companies found in the neighborhood of Myrtle and Perry, as well as the older and well-known orchard of Mr. S. H. Rumph at Marshallville, were all keenly scanned by our party.

Looking the matter over carefully, one cannot but feel that the fruit business is in its infancy in Central Georgia, notwithstanding the magnitude of individual interests already in evidence. The crop of last year was

distributed in but few of the great markets of the country, these greedily taking all good fruit that was offered. On my way North I met a representative of one of the great Northwestern railway systems, who had been hunting fruit among the peach-growers for his road, thus meaning the distribution of peaches to St. Paul, Minneapolis, Milwaukee and the other points of population in the Northwest. He could get no promises, although confident of ability to send through cars in good shape. Thus these markets are yet untouched by the Georgia peach, which, coming to perfection at a time when there is practically no other good fruit in the market, cannot but be acceptable wherever it is landed in good order.

The experience of the growers this year in fighting insect pests, and their experience with regard to improperly handled fruits, only points their way to greater success as system and method shall take the place indicated by experience dearly obtained. I have great faith in the future of the Southern States as their marvelous resources become better known in overcrowded sections of country, and can only wonder that our Eastern farmers will seek the bleak Northwest where their semi-occasional crops are in constant danger of being bodily lifted out and deposited somewhere in the next State, instead of turning their eyes toward the sunny South, with its civilized condition, salubrious climate, proximity to markets and excellent labor supply.



## TRUCK-GROWING IN LOUISIANA.

Bulletin No. 42, of the Louisiana State Experiment Station, contains the following interesting account of the truck-growing industry in that State:

"The peculiar location of this State, occupying the extreme southern end of the great Mississippi valley, with its 30,000,000 of people, its excellent transportation facilities, including the great Mississippi river and its tributaries, which must forever serve in a measure as a check upon excessive charges for freight of the several lines of railway which parallel it, its favorable climate and its excellent soils, all point to 'truck-growing' as a most profitable industry for the intelligent agriculturists of this State to engage in. The large cities of Chicago, Cincinnati, Indianapolis, St. Louis, Kansas City and others should be mainly supplied with early vegetables from this State. Railroads have always shown a disposition to give rapid and cheap transportation to farmers, whenever the supply of trucks would justify the expenditure needed for the equipment of cars suitable for the undertaking. To make this supply requires the active co-operation of many farmers in each locality, and unfortunately the conservatism of the latter is so great as to preclude such action until forced by necessity or demonstrated by many successful individual efforts that such a co-operation is safe and profitable. Successful individual effort is of rare occurrence. In shipping a few boxes or barrels of vegetables they must go by express in order to reach a distant market in good order, and the charges are so excessive as to preclude profit. A single carload sent by freight does not receive the despatch nor attention which is necessary to insure the arrival in good order of its

contents. Hence little or no profit is usually the result of such shipment. There must be a sufficient number of shippers to load a full train of well-ventilated and refrigerator cars, which can be despatched as through freight behind the through passenger trains, at regular intervals, to insure handsome profits to the grower and reasonable rates of freight to the railroad. Unfortunately, many sections of the State are waiting on the railroads for such transportation, and the railroads, on the other hand, are delaying the preparation of such equipments and the adoption of such a schedule until the trucks are offered. Hence little or nothing is being done along the lines of some of our main railroads, which run through sections of the State, which are pre-eminently adapted by nature to the growing of fruit and vegetables. Fortunately, some of our railroads have awakened to the necessity of building up the country through which they pass, and have given facilities for cheap and rapid transportation, even at heavy losses at first to beginners in this industry, realizing that if a few farmers could successfully inaugurate this new departure in agriculture thousands would quickly follow, and ultimately enable them to recoup losses, build up the adjacent country and increase the business of the road.

"The Illinois Central Railroad some years ago adopted this wise policy, and is today flattered by the wonderful results obtained. During the early spring a rapid vegetable train leaves New Orleans daily and picks up all along its lines cars freshly loaded and awaiting its arrival. These trains follow closely the through passenger trains to Chicago, and arrive in the latter city with little or no injury to the vegetables. Hence profitable returns to the farmers along its lines for cab-



bagas, beans, radishes, lettuce, cucumbers, beets, strawberries, etc.

"A visit to the country along this road from Lake Maurepas to the State line, will convince anyone of the wisdom of the railroad in adopting such a policy. A few years ago scarcely any depot along this line in this State paid the expenses of a local agent. Today one finds the thriving towns of Pontchatoula, Hammond, Tickfaw, Roseland, Amite, etc., all busily engaged in truck and fruit-growing and furnishing the road a large income from the transportation of their products. Small farms, well tilled, are affording good incomes to thousands of Northern and Western farmers, who have come South for health, recreation, comfort and money. The Mississippi Valley Railroad is also proffering similar inducements to the dwellers along its line, but as yet has met with but little encouragement in this State, the farmers and planters adhering to the old practice of growing sugar-cane and cotton.

"The Missouri Pacific, which enters the State in Morehouse Parish and penetrates it as far south as Alexandria, has succeeded by its liberal inducements in persuading many of the denizens along its line into the truck industry. So great has been its success that recently a horticultural society was organized in the city of Monroe for the avowed purpose of growing trucks for shipment to the West. This society has a numerous membership pledged to the growing of a large acreage in vegetables the present year. Sooner or later 'truck-growing' will be a large industry along this road under the liberal policy now being practiced.

"With the establishment of permanent 'truck-growing' there will follow in every neighborhood a canning factory, which will utilize the surplus which distant markets refuse. Such factories will insure the grower a home market at some price, when remunerative returns are no longer obtained by shipment. Thus one industry creates another, and by multiplying them

in every favorable locality, a large aggregate wealth is created.

"The good work accomplished by the Illinois Central and Missouri Pacific should provoke the other roads of our State to similar action, and the very successful results obtained by the former should convince them of the wisdom of such a move. The farmers generally are ready for the trial of any new industry which will bring exemption from the dominion of cotton, but must first have deep conviction of the sincerity of the railroads in proffering full co-operation.

#### SECTIONS OF THE STATE ADAPTED TO TRUCK FARMING.

"Sandy loams, carrying a normal content of from 6 per cent. to 12 per cent. of moisture, are peculiarly adapted to certain kinds of trucks, viz, Irish and sweet potatoes, radishes, beans, peas, tomatoes, melons, beets and strawberries. While heavier soils with a larger moisture capacity are better adapted to cabbages, onions, egg plants, etc.

"In and around New Orleans are grown an immense amount of 'trucks;' all kinds for the local market, and cabbages, onions, egg plants, etc., for shipment. There are over 2500 gardeners engaged in this industry. Around the cities of Baton Rouge and Shreveport there are also local gardeners who supply these cities and occasionally make small shipments abroad.

"Louisiana has a large area of soils of the sandy loam type specially adapted to truck and fruit-growing, and it is very widely extended, bordering nearly every railroad in the State.

"The Illinois Central nearly bisects the pine hills of the Florida parishes, and extends for over fifty miles across them. Experience has proven the adaptability of these soils to this industry, and thousands of acres are today occupied by strawberries, radishes, lettuce, beets, potatoes, cabbages, etc.

"The Mississippi Valley has a small industry in and around Wilson of most excellent truck soils, and is doing much towards developing them. Beyond the Louisiana line, near Centre-



ville, Gloster and other points in Mississippi, similar soils prevail and larger developments of the truck industry have been secured.

"The Missouri Pacific is gradually developing the fitness of the soils along its line, and will some day have village truck farms along its entire length. The two sections of the State, however, which are perhaps better adapted to a general truck-growing have had the least development.

"Experiments at the North Louisiana Experiment Station, Calhoun, La., on the line of the Vicksburg, Shreveport & Pacific Railroad, have shown that vegetables of nearly every kind and of perfect quality could be easily and cheaply grown. The soil on this station is typical of the larger portion of North Louisiana, through which the Vicksburg, Shreveport & Pacific runs, in an east and west, and the Texas & Pacific in a north and south direction. No finer market gardens could anywhere be established than along these two roads, and a liberal and persuasive policy on the part of the managers of these roads would soon demonstrate the truth of this assertion, give an increased business to the roads, develop population and enhance the values of adjacent lands. It is hoped that such a policy may soon be inaugurated.

"The country bordering the Southern Pacific from the Mermentau river to the Texas line is well adapted from the character of soil to truck-growing. Drainage, which can easily be accomplished, will be needed in many places for the best results. A similar country borders the Watkins & Gulf Railroad, extending from Lake Charles to Alexandria. The very liberal policy which both of these roads have pursued in securing the many new settlers along these lines will most probably be continued in co-operation with these settlers in developing every profitable new industry. It is, therefore, reasonable to expect an early development of the fruit and truck industries along these lines. It will thus be seen that Louisiana has the climate, the soil, the transportation facilities and intelligent

farmers, the needed factors for success in truck and fruit-growing. It only requires the harmonious co-operation of the last two to bring to full fruition the grand possibilities of the industry.

#### SUGGESTIONS TO THOSE CONTEMPLATING EMBARKING IN THIS INDUSTRY.

"While the soils mentioned above are physically adapted to the growing of trucks, they must be made very fertile for profitable results. Truck-farming means intensive, high farming. Lands dedicated to trucks must be heavily fertilized, not with commercial fertilizers only, but with such home-made manures as will insure large supplies of organic matter. The frequent incorporation of vegetable matter by the growing and turning under of some leguminous crop, preferably cow-peas, additioned by mineral manures, will in a few years render these soils well adapted to truck-growing.

"If stable manures be used, they should first be thoroughly composted and several times piled and cut down, in order to bring it into a most available condition as plant food. A compost of stable manure, cottonseed, acid phosphate and kainite, mixed in such proportions as will suit the crop to be grown, will be found a very effective fertilizer, perhaps superior to any other mixture.

"When the supply of home manures is inadequate for the demands of your crop, these may be supplemented by cottonseed meal, acid phosphate and kainite, mixed to suit the kind of vegetable grown.

#### PROPER ROTATION

must be observed in truck growing as in general farming, if the fertility of the soil be maintained and maximum results desired. A slight knowledge of botany, yea, even of the character of the vegetables grown, will greatly assist the farmer in determining the rotation to be adopted. Melons, cucumbers and squashes belong to one family and should not succeed each other. Egg-plants, tomatoes and Irish potatoes form another, and beans and peas another.



"Always follow a crop by another of a different family. Expressed in a simpler manner, roots should not follow roots. A top-rooted plant will follow well a fibrous-rooted one. After a heavy manuring, cabbages, onions, Irish potatoes and egg-plants should be planted, since these require excessive fertility for best results. Follow these crops with tomatoes, squashes, etc., and these in turn by beans, peas, etc. A farmer will soon have a suitable rotation of both crops and fertilizers.

## COLD FRAMES AND HOT BEDS

may be frequently used with advantage for the growing of early vegetables. Even the use of glass sash may sometimes be made to pay handsomely.

"The use of cheap cheesecloth is frequently found efficacious in protecting tomatoes, egg-plants, etc., against frosts, and several transplanting under such a cover before setting in the field has been extensively practiced with excellent results."

## SOME NOTES OF TRAVEL IN MISSISSIPPI.

*By M. B. Hillyard.*

A recent trip through parts of Louisiana and Mississippi afforded me an opportunity for making conclusions on certain points which have been unsettled in my mind hertofore. I also learned something more (and something new, too) as to the many-sided developments going on in the localities visited. I also visited all the Northern—so to speak—towns, actual and theoretical, between New Orleans and Jackson, Miss. By Northern towns I mean those composed, mainly or principally, of Northern and Western people. Two or more are almost exclusively so, there hardly being a Southern family in these towns. Almost all these communities are contented, even joyous and elated in temper; full of faith in the future of their respective towns; full of talk about their merits; public-spirited—a sort of committee of the whole on advertisement. As my mission was in the field of journalism for a New Orleans daily paper, I had a chance to note the sedulousness and ingenuity of their boom work. Of course, it must confuse a Western man, who is undecided, in or near what town to locate, to hear the blazon of panegyric stunning his ear by the inhabitants of respective localities as to the superior attractions thereof; but one thing is mighty sure to happen: nothing but a Northern

town gets a Northern immigrant. It seems to be one of the most difficult things to secure Northern men for any but these Northern towns. There are but few exceptions. I must say a good word for the broad experimentalism of these immigrants. They are trying, in fruits and vegetables, varieties without number. This is very wise and progressive. They can tell you the best radish, cabbage, beet, strawberry, for their localities. One great experimentalist has tried seventy-two varieties of plums. Only two or three succeeded. But one variety will probably make him rich, as he got \$12 per bushel for them. Another has a plum he originated, which is said to be one of the greatest acquisitions to that fruit ever made. This I have, on the very highest authority. I sought in vain to get up with it. It is said the owner has an impassable, high wire fence guarding it. He produced this plum after years of trial—one of 500 seedlings, all the rest discarded. I went on a cherry hunt with one great experimentalist. On the trip I found a seedling pear which I have named Dr. Stackhouse, in honor of this great pioneer, now deceased. (This pear I may have something to say of hereafter.)

One can see from my cursory notice of the experimental, alert spirit of



these Western horticulturists and "truckers" what an advance the South will receive in their respective lines. Many new varieties of fruit will be found or produced especially adapted to the South. The plum I mentioned is a case in point; my Stackhouse pear; a grape I first lately saw—the Oldstein, originated at Shreveport, La., much like the Concord, earlier and an even ripener. Then I am warm on the track of several Bigarreau and heart cherries in Mississippi. And Mr. Day, of Crystal Springs, and I have satisfactorily determined that the Early Richmond and Morello cherry, so called (although the former is in the Morello class) can be successfully raised as low as latitude  $32^{\circ}$  and lower in the pine woods and orange-sand soils of Mississippi. This is certainly well worth knowing, and settles favorably the long-disputed question as to whether any cherry can be successfully raised so far South.

I saw some conclusive facts as to the apple. You may safely put Southern Mississippi above the Louisiana line in the summer-apple belt. I will not say more, for as to winter varieties my investigation did not extend; and I will not say how many varieties of the summer apple can be successfully raised. And as you go North, certainly up to or near Jackson, the apple soil improves, as you find less sand and a heavier soil—clay loams generally. Soil is the great factor, and as the soil varies much, latitude doesn't count for much.

In apples I must particularize the transcendent Crab, at Crystal Springs, superb and beautiful beyond belief; and an apple, judged to be the Duchess of Oldenburg (although undecided), at Terry, Miss. Another revelation as to the apple in its size and color.

I noticed the growth in dairying. Several extract their cream by separators and send it to New Orleans. Most send the milk. It is having a very noticeable effect on the milk from the city dairies, and banishing water from it. Almost everyone in the country has more or less grade and thorough-

bred Jerseys in his dairy, and the Holstein and Shorthorn appear in limited number. It seems most difficult to induce these dairymen to sow the cultivated grasses for their cattle, and while East Mississippi has tens of thousands of acres in the various clovers—orchard grass, Kentucky bluegrass, et al., and that, too, by Southern men, the immigrants from the West are almost totally disregarding them. Undoubtedly, the stiff, cretaceous soils of the prairie belt in East Mississippi are far superior grass lands to the sandy loams of the south-central part of the State. Nevertheless, one can raise fine grasses of the above and other species in the latter area; and as a number of Western men whom I saw are satisfied of this fact, we may look for some handsome fields of them shortly.

I noted with great pleasure the enthusiasm of some swine-breeders, and an association of these has been lately organized. No better Poland-Chinas and Berkshires can be found anywhere than are now raised in Mississippi—thoroughbred, registered animals, for which the most startling prices have been paid.

Poultry-raising, especially the business of spring chickens for the West, is forging ahead. A poultry-breeders' association has been lately formed. A very elaborate article I wrote last year for the Times-Democrat gave an immense impetus to this business, and the gentleman about whose operations I wrote tells me that he received over 400 enquiries about it from various portions of the South, and that the letter went the rounds of the poultry journals of the country, even as far west as California.

Another industry, totally new, is that of raising Belgian rabbits, about which I wrote an elaborate article for one of the New Orleans dailies.

It is almost impossible to enumerate all the aspects of the new life in Mississippi now cognate to the soil; but here is a partial list: Exporting corn and hay; raising thoroughbred cattle, sheep and hogs of almost every breed; fattening on grass and cotton-



seed hulls grade cattle for the Western cities; raising fruits and vegetables in the largest way and canning them to some extent; the nursery business; raising pecans in a good measure; canning shrimp and oysters largely; raising and distilling peppermint; raising flowers for winter sale in Western cities; raising fancy chickens, eggs and spring chickens; poultry-raising in general; rabbit-farming; broad fields in the cultivated grasses; dairying largely; creameries for cheese and butter. What a list! What State covers such a broad field in industries kindred to the soil? And still I have not made my list complete.

Then take cotton and woolen manufacture, the numerous industries cognate to lumber, the immense business in brick manufacture, and measurably in tile, and, in fact, I know not what. And in truth we have but begun.

It seems an epoch in town building, and while many new towns have sprung into being and vigor in the last few years, many more are coming. Almost every one affords to the wise student some light how to better the coming ones. I take it, that too little emphasis has been given to the rare winter climate of a certain belt in South Mississippi and North Louisiana. Nearly a quarter of a century ago I made a study of this, and while I did not fail to stress the wondrous future in fruits and vegetables, manufacturing, etc., I made very prominent its delicious winter climate. I think the areas that shall fairly delineate this are destined to a great future. The people who hunt climate are generally wealthy, cultured, build the handsomest houses, make the most charming social life.

Were I ever to undertake a new town, and in the area in question, I should certainly seek to especially commend the climate. I see but one new town working on this line, and its little sanitarium is crowded every winter.

To my mind, one of the greatest mistakes the average railroad immigration and real estate agent makes is to hold out the inducement of large and rapid fortunes. The day is past for it. I used to urge it up to fifteen years ago, when early tomatoes, potatoes, peaches, etc., were \$9 to \$12 per barrel; strawberries and raspberries \$1.50 a quart. But that day will never come again. Let men be reminded that, as a general thing, they must expect poor land (which, however, they can make as fertile as any under the sun), that they can make far more in fruits and vegetables than at home, that they can buy land at easily one-tenth (and frequently less) than at home, that they will find a delightful winter climate and a more agreeable summer one, far better health and a cure for and exemption from many ailments, that they can have flowers and vegetables the year round and almost the same as to fruits, that they will find schools, churches and congenial people, railroads, no blizzards, cheap fuel and lumber, no cyclones, frequently no mosquitoes, pure, cool water never-failing in springs and wells, and rivulets and creeks (often abounding in fine fish) of clear and unfailing water over pebbly bottoms that—but is not that enough? Why try to make them believe they have only to plant a peach orchard and strawberry patch, or a large "lay-out" in cabbage or tomatoes, and be metamorphosed into millionaires or plutocrats in a year or two?



## AGRICULTURAL EXPERIMENT STATIONS.

Although it is about a hundred years since agriculture began to be considered a fit subject for scientific research, it is less than fifty years since the development of the present plan of organized investigation was started by a company of German farmers living near Moeckern; and when later the co-operation of the University of Leipzig and of the German government was secured, an idea was born which has taken root all over the globe, and which in many of its relations to the welfare of the community is of paramount importance to national life, for throughout all history the depletion of the soil and the decline of agriculture have been followed by a fatal impairment of national vigor.

The first experiment station in America was started by the Wesleyan University at Middletown, Conn., only twenty years ago, but so fruitful were seen to be the possible results of widespread research along the same lines that the work was immediately taken up elsewhere throughout America, so that there had been some seventeen stations established here prior to the conference of representatives of agricultural colleges and experiment stations called by Agricultural Commissioner Norman J. Colman in 1885. From this convention resulted the organized movement for national assistance in this work, which resulted two years later in the passage by Congress of what is known as the Hatch bill, which gives to each State and Territory \$15,000 a year out of the national treasury for the maintenance of an agricultural experiment station. Since that time so rapidly has the work been extended that stations are now in operation under this act in every State and Territory, except Alaska, and in some States supplemental stations have been established by State appro-

priations or private contributions. A million dollars are spent annually in the maintenance of these experiment stations, three-quarters of which comes from the national treasury, and the work in America leads the world. It has been declared that the American farmer, although not a scientific specialist, has a keen sense of whatever is sound and good, and in the application of the practical results of scientific investigation he may be counted on to zealously further this governmental work. "In the history of no nation has there been such a thirst for knowledge on the part of the great masses of the people, such high and just appreciation of its value and such wide-reaching, successful and popular schemes for self-education; no other nation has so large a body of farmers of high intelligence; never before has the great agricultural public been so willing and, indeed, so anxious to receive with respect and use with intelligence the information which science offers; never before has science had so much to give."

While the stations have found out much that is new and of economic value, one very great work accomplished has been to teach the farmer how to help himself, for in many lines it has been shown that to achieve the best results the farmer must himself be an experimenter. Agriculture cannot be made an exact science for the reason that the manifold intricate operations continually going on in the air, soil, plant and animal world make the formulation of an unswerving set of rules an impossibility. As in the practice of medicine, so much depends on individual peculiarities that the scientist must content himself with the presentation of certain ascertained facts and principles which may serve as a guide to an improvement in the



methods of agriculture; but the successful farmer must himself intelligently study the conditions and needs of his soil and his animals, and apply the teachings of science in accordance with the lessons of his own experience.

The benefits of the co-operation of farmers with the stations have been particularly conspicuous in experiments made in the use of fertilizers, hundreds of farmers having in this way gained important information which they have also imparted to their neighbors, and by learning proper methods of experimenting have been enabled to apply the experience gained by scientific investigation to peculiar conditions of individual farms. Many useful results have been reached in the study of soils and fertilizers, and also in the tests of new varieties of cereals, forage plants, vegetables and fruits; in researches on the composition and digestibility of feeding stuffs; in feeding experiments, especially with pigs and dairy cattle; in investigations in dairying, especially regarding means for testing milk and the methods of cheese-making; in observations on plant diseases and injurious insects, and in experiments on repressing these enemies of the farmer.

A classification of the work of the experiment stations may be made in a general way, as (1) to act as bureaus of information on many questions of practical interest to the farmers of their several localities; (2) to seek by practical tests to devise better methods of agriculture and to introduce new crops and live stock, or to establish new agricultural industries; (3) they aid the farmer in his contest with insects and with diseases of his crops and live stock; (4) they help to defend the farmer against fraud in the sale of fertilizers, seeds and feeding stuffs; (5) they investigate the operations of nature in the air, water, soil, plants and animals, in order to find out the principles which can be applied to the betterment of the processes and products of agriculture.

In the United States there are fifty-four experiment stations. The stations

are conducting a wide range of scientific research in the laboratory and plant house and an equally large amount of practical experimenting in the field, the orchard, the stable and the dairy. Thirty stations are studying problems relating to meteorology and climatic conditions. Forty stations are at work upon the soil, investigating its geology, physics or chemistry, or conducting soil tests with fertilizers, or in other ways. Fourteen stations are studying questions relating to irrigation. Thirty-nine stations are making analyses of commercial and home-made fertilizers, or are conducting field experiments with fertilizers. At least fifteen stations either exercise a fertilizer control in their respective States, or make analyses on which the control is based. All the stations are studying the more important crops, either with regard to their composition, nutritive value, methods of manuring and cultivation, and the best varieties adapted to individual localities, or with reference to systems of rotation. Thirty-five stations are investigating the composition of feeding stuffs, and in some instances making digestion experiments. Thirty-seven stations are conducting feeding experiments for milk, beef, mutton or pork, or are studying different methods of feeding. Thirty-two stations are investigating subjects relating to dairying, including the chemistry and bacteria of milk, creaming, butter-making, or the construction and management of creameries. Forty-five stations are studying methods of analysis and doing other chemical work. Botanical studies occupy more or less of the attention of about thirty stations; these include investigations in systematic and physiological botany, with especial reference to the diseases of plants, testing of seeds with reference to their vitality and purity, classification of weeds, and methods for their eradication. Forty-three stations work to a greater or less extent in horticulture, testing varieties of vegetables and large and small fruits, and making studies in varietal improvement and synonymy. Several



stations have begun operations in forestry. Thirty-one stations investigate injurious insects, with a view to their restriction or destruction. Sixteen stations study and treat animal diseases, or perform such operations as dehorning animals. At least seven stations are engaged in bee culture, and three in experiments with poultry.

The literature disseminated by the stations naturally forms an important feature of the practical work accomplished. Each station is required by law to publish an annual report and at least four bulletins a year. The more progressive stations publish many more than four bulletins a year; some of them more than an average of one a month. These bulletins are mailed free on application to any farmer in the State in which they are published. They constitute the best

of all agricultural literature. "Besides regular reports and bulletins, a number of stations issue press bulletins, which are widely reproduced in agricultural and county papers. The station bulletins are now regularly distributed to half a million persons who are either farmers or closely identified with the agricultural industry. Moreover, accounts of the station work are given and discussed in thousands of newspapers. The New York Cornell station alone estimated some time ago that each one of its publications directly or indirectly reached more than half a million readers. Besides this, a very large correspondence with farmers is carried on, hundreds of public addresses are annually made by station officers before farmers' meetings, and the results of station work are taught to thousands of students in agricultural colleges."



# THE SOUTHERN STATES.

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## THE SOUTHERN STATES.

AN ILLUSTRATED MONTHLY MAGAZINE  
DEVOTED TO THE SOUTH.

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The SOUTHERN STATES is an exponent of the Immigration and Real Estate Interests and general advancement of the South, and a journal of accurate and comprehensive information about Southern resources and progress.

Its purpose is to set forth accurately and conservatively from month to month the reasons why the South is, for the farmer, the settler, the home seeker, the investor, incomparably the most attractive section of this country.

### Foreign Immigration Through Galveston

The most significant move yet made in behalf of securing European immigration for the South has been brought about through the rate war inaugurated by the Missouri, Kansas & Texas Railroad, and the effects of the new departure are certain to be far-reaching, and of great importance to the South. With the aggressive policy which has latterly marked the management of the Missouri, Kansas & Texas, such a cut in passenger rates on business out of Galveston has been put into effect as makes it likely that a large part of the immigration bound for the West will hereafter be diverted from Atlantic ports to Galveston. The Missouri, Kansas & Texas has made a sweeping cut to all Western points, and has arranged with connecting lines for such co-

operation as enables it to boldly enter the field as against all the Eastern trunk lines for European business bound for trans-Missouri points. The rates made by this road are from 40 to 50 per cent. below the rates from New York to all points West, and in order that the smaller European steamship lines running into Galveston may not secure a lion's share of European immigration, the big North German Lloyd and Hamburg-American lines have arranged to run boats regularly hereafter between Bremen and Hamburg and Galveston, even though this move means the curtailment of the service heretofore given to New York and Baltimore.

The significance of this new departure may be more fully comprehended when it is remembered how prone the European immigrant is to locate permanently at or near the point he first strikes on landing from his voyage. This is attested by the fact that of the residents of New York, where the greatest number of European immigrants has landed during the past forty years, the native-born population is today less than one-third of the total population of the city.

Great revolutions have been inaugurated with initial moves of no more pretentious design than marks this apparent effort of an ambitious railroad to merely secure an increased business on a basis of doubtful immediate financial advantage. The student of affairs sees in it an epoch-marking event.

### Summer Temperature North and South.

The appalling fatalities accompanying the hot wave which enveloped a large portion of the United States during the early



days of August—fatalities which it is estimated number well on toward 10,000 human victims and untold thousands of domestic animals—have served to give emphasis to the declarations frequently made by the “Southern States” that, as compared with the North, the South is an infinitely superior region for comfort and health during the summer season.

While the deadly heat was daily striking down its hundreds in every large city of the North, sunstrokes and prostrations were unknown in the far South, where the temperature was much lower than in places a thousand miles to the north; and even in the few Southern cities where the thermometer indicated a degree of heat equal to that of the highest temperatures in the North the prostrations were rare and deaths from sunstroke almost unheard of.

The “Southern States” gave prominence in its June issue to the suggestion that the intending visitor to the South could do no better thing than to so time his visit as to bring him into the Southern country during the heated term. Wherever this advice is taken the visitor is surprised and delighted with the climatic conditions he encounters.

A comparison of the various temperatures during the August hot spell will be interesting matter for future reference, showing as it does the great advantage even the very far South possesses over the North during the midsummer. Not all these figures have yet been collected, but such as have been presented prove a case which fuller information could only confirm and strengthen. Take, for instance, reports made to the Florida Times-Union from seventeen Southern and eleven Northern cities and three border cities, Cincinnati, St. Louis and Kansas City. The seventeen Southern cities showed at the time of observation an average maximum temperature of 89 14-17 degrees; the eleven Northern cities, 92 2-11, and the three border cities

94 degrees. At the same time a comparison between the extreme Southern and extreme Northern cities of the United States showed an almost identical average maximum temperature, with this difference in favor of the South, that whereas the perpetually cooling breezes from the Gulf do not materially affect the records of the thermometer, they bring about a condition of comfort and healthfulness which make impossible the disastrous results of a heated term at the North. Thus the temperature at New Orleans has scarcely exceeded 90 degrees this season, and there have been no deaths from the heat, and the same may be said of almost the entire coast country.

In this connection it is interesting to note the suggestion made by the New Orleans Picayune to the effect that Southerners would better stay at home during May, June and July, and not begin their northward flight until after the middle of August, when it may be permissible to seek in the cooling Northern latitudes relief from the only really inconvenient feature of the Southern summer, its protracted length.

#### Good Advice.

E. S. Compton, of Newark, N. J., on a recent visit to New Orleans, in an interview with a reporter of the Picayune, said:

“Here in Louisiana there are today lands that are worth millions to the State, from a standpoint of fertility and excellence, that are going to waste. People in the North are afraid to come here, because they have an erroneous idea of the place. You should get before them, presenting to them the fact that you have the greatest natural agricultural country in the world, and that your resources are diversified and magnificent. No section of the Union is better able to rightfully claim the people than this. No section is so poorly advertised and more thoroughly misunderstood. Let the State be pushed forward with the business methods that apply to the transaction of the business of any private firm and the results will be marvelous.

"When you have a good factory you advertise it. Merchants advertise their wares, and why should not a State advertise its advantages? Every settler of good character that you secure is an additional means of enriching the State. The taxes upon many are lighter than the taxes upon a few, because there are more to divide the burdens of government among. The prosperity in a community where every foot of ground is made to produce something is greater than in a community where the people are few and the planting is a monopoly. Get out and advertise that this is the place to come to to find success and easy business prosperity, and the people will come with their goods and chattels to make an empire State of Louisiana."

If Louisiana and all the other Southern States would take Mr. Compton's advice, and advertise their advantages liberally and aggressively, the volume of people and money and factories now going South would be enormously increased.

### **How to Preserve Surplus Fruit.**

One of the most prosperous vocations in Western New York is that of evaporating fruit. In 1871 a farmer named Hatch, living in Monroe county, near Rochester, accidentally learned that sliced apples could be preserved and made a pure white color by the use of brimstone. He began preserving the fruit in this manner and found a ready market at a high price. Other fruit-growers in the vicinity took up the idea, and fruit-evaporating towers were constructed for the purpose of drying fruit on a large scale. The method commonly used is as follows: A sieve, laden with the sliced fruit, is placed in the tower and the brimstone fumes are allowed to pass through it. It is then hoisted to a higher point and exposed to the air, and another tray of fruit takes its place. This in turn is elevated and replaced by a third tray. The process is continued until the tower is filled with the trays of fruit. But a comparatively short time is required to complete the process of evaporation, when the product is

ready to be packed and shipped to any portion of the country or to Europe. Large shipments are annually made to France, Germany and Russia. In France the evaporated fruit which comes from Western New York is in common use, and it is stated that the city of Rochester is better known in that country on account of its fruit products than in any other way.

There is a suggestion in this which Southern fruit-growers would do well to consider. The opportunity for preserving fruit as outlined can be utilized by them. There are times when the crops of apples, peaches or plums may be so large that they cannot be marketed at once with any profit. In this case the use of evaporators would place the fruit in a condition where it could be stored for many months, or sent North and sold in that condition at a much higher price than in its fresh state. The cost of the evaporators is comparatively little, and one evaporator would do for a number of large orchards. The process can be applied to peaches, berries, plums, apricots, cherries, etc., as well as apples, and there is no reason why the Southern fruit-growers should not find a market in Europe for such goods, as well as the Northern horticulturists.

### **Agricultural Experiment Stations.**

Comparatively few persons in the United States, we presume, adequately understand what a great work has been accomplished by agricultural experiment stations in the United States, which had a beginning in Connecticut only twenty-one years ago. These stations began, on a small scale, in Saxony, in 1851, at Moeckern, a small village. Since that time they have multiplied all over Europe, and, under the directing genius of some of the greatest chemists in the world, have given a stimulus to farming beyond all calculation. Chemistry applied to agriculture has become, as it were, a special department of science and the true friend of the enter-



prising farmer. So great is chemistry esteemed in Europe that it is said a professor at Heidelberg University is paid no less than \$40,000 a year. It would take many pages to describe what this science has done in recent years for the analysis of soils and production of fertilizers, the improvement of crops and destruction of noxious insects. We are told that in two counties, of Georgia, located side by side, there is a marked difference in the farm production, because one of them is conducted in an old-fashioned rut, and the other along the lines of modern science. Everybody at all acquainted with the subject knows that a rich and intelligent farmer in any neighborhood, who is abreast with the age and given to development, exerts an amazing and beneficial effect upon people round about, who benefit by his knowledge and exploitation. When this example is vastly enlarged by State and government patronage, in an organized and disciplined form, as in experiment stations, the value of such an institution is incomparably great and beneficent. These stations issue periodical bulletins, based upon practical exploitation, and they are looked for eagerly by all cultivators of the soil who rise above mere plodding industry. Near Augusta, Ga., Mr. Berckmans, a Belgian gentleman, scientifically educated, bought a poor tract of land from a great cotton planter, and his failure was confidently anticipated by men of the old regime. He converted that nearly barren waste into a horticultural nursery which is a marvel of fecundity, and he has grown rich and famous. He, to use one of Grady's epigrams, "manured the land with brains." Experiment stations follow along the Berckmans line, with a much more extensive opportunity, and they cannot be too highly commended or liberally sustained by the State or the government of the United States.

An account of the work of agricultural experiment stations in the United States is

given in another part of this number of the "Southern States."

### Isolated Cities.

It would seem to be a sort of paradox that no considerable town should exist within twenty miles of an important city, especially an old and famous seaport. Yet this is a fact concerning such cities as Charleston, Savannah and New Orleans. They are what some one has called "isolated cities." The large cities of the East and West act magnetically in the creation, as it were, of important and thriving circumjacent towns. Between Wilmington, Del., and Philadelphia, and more notably between Philadelphia and New York, there is an almost continuous chain of enterprising municipalities, nourishing the metropolitan centre and being nourished in return. Savannah has no town of any consequence within twenty miles of it by rail. Charleston and New Orleans are in the same category. And yet these cities are historic, contemporaneous with our earliest history, splendidly situated and admirably circumstanced for wealth-production. There may be reasons connected with slavery, war, reconstruction and the like why such conditions exist, but it would be worth while for those cities to study the problem and see if correction of the evil is not comparatively easy.

There is reciprocal opulence in busy towns circling around the great metropolis by miscellaneous trade. We have cited the cases of New York and Philadelphia. Boston would not be half as wealthy as it is but for the hundred or more neighboring places, containing from 1000 to 20,000 people, located within a radius of about ninety miles of its limits.

The cities of the South, such as Atlanta, Charleston, Savannah, New Orleans, Birmingham and others, should be actively interested in drawing colonies to the adjacent territory and in building up towns and villages in the vicinity. Their continued

growth and prosperity will be largely affected by the development of this outlying territory.

We print elsewhere in this issue an exceedingly interesting and noteworthy letter from Hon. J. M. Hubbard, of Connecticut, which is marked by a high and broad patriotism such as, unhappily, is too seldom encountered. The closing paragraph of the letter—

“Our whole country is to be built up in beauty and strength, and we are all of us to be glad and grateful for the fact that all

are citizens of the United States of America”—

might well be printed permanently in conspicuous type in every newspaper in the land, engraved upon the walls of every schoolroom and borne in the hearts of every citizen of our great country.

The interesting article on “The Southern People,” published in the July number of the “Southern States,” was from the pen of Mr. Reginald Dykers, of New Orleans, whose name as author of the article was inadvertently omitted.





# IMMIGRATION NOTES.

## **A Dunkard Colony for Louisiana.**

A committee of Dunkards from widely-distant portions of the United States recently visited the neighborhood of Lake Charles, La., with the object of locating a large colony there should conditions be found satisfactory. The report made by this committee to the brethren of the church is highly commendatory. The committee is particularly well pleased with the climate, soil and future prospects of the country, and with the sociability and hospitality of the people. The report continues: "The climate is mild and healthful. The Gulf breeze cooling the atmosphere, makes the day pleasant. The soil is good, and grows vegetables the whole year. The country is level and adapted to the production of rice, sugar-cane, fruits and vegetables. An abundance of good fish are in the streams and waters; also fine beds of oysters. Such timber as pine, cypress, magnolia, live oak, etc., are in abundance, and good building timber is furnished to parties building houses at from \$9 to \$11 per thousand." The well-known thrift and industry of the Dunkards, almost without exception, will make a colony of them a valuable acquisition.

## **Hungarian Grape-Growers in Texas.**

An experiment is to be made with Hungarian immigration into Southern Texas, Messrs. Hahl & Pudor, of Houston, having contracted for a colony of farmers from Hungary, who will locate on a 4000-acre tract of land in Brazoria county, Texas. Twenty-five families are expected to arrive shortly in Galveston from Hamburg and Bremen and will at once locate on the colony lands. These immigrants expect to devote their attention very largely to the fruit and grape business.

Knoxville, Tenn., real estate agents are negotiating with the promoters of a large

colonization scheme originating in Illinois. About 15,000 acres are wanted as nearly in one body as possible. It is expected that representatives of the colony will visit Knoxville and other places in the South soon to more definitely determine on a locality.

## **To Grow Sugar Beets in South Carolina.**

Mr. Julius Hartman, of Atlanta, Ga., is arranging to establish a colony of German families in South Carolina. The colonists will engage mainly in raising sugar-beets, and a factory will be built to utilize this product.

In speaking of the enterprise, Mr. Hartman says:

"The emigration which the West has had for the past twenty-five years has now turned to the South. Our millions of acres of good farming land will soon be settled by Northern and European farmers. The land is cheap, and when the work is done here there are far better results than in any other section of the country.

"Many farmers from my native country wanted to come to the South, provided I would agree to remain with them. This I at first refused to do, but I finally consented, and the next question with me was where to find the right sort of land for the cultivation of our chief crop, sugar-beets, as this will be a profitable business, with no tax to pay for the production of sugar, as in the case of Germany. The import of sugar is enormous, and amounts yearly to over \$100,000,000, but this will not last, and the German farmers are well aware of it; consequently it cannot surprise us when a large immigration of farmers, well acquainted with all the methods of raising a high-standard sugar-beet, sets into this country, and when they are guided well it will be a blessing to them.

"After a search of two years I have found exactly what I have been looking for in Abbeville county, South Carolina, near the



line of Georgia, and in the same latitude with Atlanta, having the same fine climate and delightful winters, with plenty of sunshine, where the summer days and nights are not of that sultry nature existing in the North. The place is known as the 'garden spot' of South Carolina, consisting of a plateau of many thousand acres, with a first-class soil and the land nearly level, having just fall enough to turn off the surplus water into the small branches running through the property. It has many springs of the best freestone and mineral water. The Seaboard Air Line Railroad runs through the tract and will erect a station thereon.

"To start a sugar factory it has been necessary to get all the land on this plateau under our control. This has now been done and a company organized.

"We have laid off a town site and platted small farms around it in twenty-five, fifty and 100-acre tracts, with streets and roads, to the best interests of the colony. We have an agent now in Germany, and I will join him there and will bring back a number of my countrymen who I will locate on this property. These German farmers are well-to-do, and will soon make a fine settlement, with a flourishing town in the centre. Good farmers on good soils always make a good town. These farmers will not only pay cash for the land they buy, but will build up good homes, and will also take an interest in the sugar factory. In 1898 we will be ready to raise sugar-beets and have a factory built with German capital to make them into sugar. The power will be electricity. A large plant at Calhoun Falls, near by, will soon be erected.

"There are at present only seven sugar-beet factories in this country—three in California, one in Utah, two in Nebraska and a small one in Virginia. There are 403 large ones in Germany. The pecuniary results here have been exceedingly profitable, even in Nebraska, where the season for good maturing of the beets is rather short and the price for labor is double what it is in the South.

"Splendid food is left after the sugar is extracted from the beets to fatten fattle for the market, and the deep cultivation necessary to the successful raising of the sugar-beet enriches the land.

"It will be a benefit to our farmers and the country generally to keep this money here which we send at present to foreign countries. Having the right kind of soil, well fitted for deep cultivation, there is no better place in this country to raise sugar-beets than the South. With plenty of sunshine, but without drought, and a long season of delightful weather, with the heavy Southern morning dews, such as I have never seen in any other parts of the country, it brings just what is needed for the successful raising of the highest standard sugar-beet. A 25-acre farm in this colony, with seven acres yearly in sugar-beets, will give the diligent farmer a good and prosperous home. W. J. Schafer, a German, near Chino, Cal., planted last year five and one-half acres in sugar-beets. His harvest was 140 tons, or twenty-five and one-half tons per acre, with 14½ per cent. sugar. The factory in Chino paid him \$658 for his crop, or over \$119 per acre. The price of the California land has gradually doubled and now costs over \$200 per acre. Our land is just as well adapted to raising sugar-beets as theirs. It would be easy for us to settle all the land in this colony with farmers from Germany, but it would not be to their best interest, and we prefer to have some thrifty American farmers, especially Germans, between them, as the farm work done here is so different from that in the Old Country, and, besides, I want to see these Germans become in the shortest time possible good American citizens."

The colony is to be known, in honor of its founder, as Colony Hartman.

### Immigration Needed.

The Florida Times-Union refers to the fact that the population numbers only about eight to the square mile in Florida, and urges the subject of immigration upon the people of Florida as a matter of the most vital importance.

"The State could easily sustain forty times its present population," says the Times-Union. "If it had such a population average land would be at least twenty times as valuable as now. Of course, such a population should be distributed between country and town. That portion living in the country should not glut the markets with tropical fruits. With intelligent



diversification 7,000,000 people could live in this State by the cultivation of the soil as well, or better, than 300,000 live now. With such products as tropical fruits of all kinds, strawberries, melons, peaches, pears, various kinds of garden vegetables, ramie and other fibrous plants, with cotton and corn, and other kinds of grain, the thoughtful man who cultivates the soil and distributes his crops properly need fear no glutted markets."

Rev. Dr. H. Engle, of Esterville, Iowa, and Prof. P. A. Eikeland, of the United Church Seminary, of Minneapolis, Minn., have been making a tour of Alabama in company with Prof. G. J. Eilestad, who has been interested for some time in the work of inducing the immigration of Scandinavians from the North to the South. Messrs. Engle and Eikeland represent a large number of Norwegian Lutherans, who have become dissatisfied with the hard conditions of the struggle for existence in the Northwest and who are turning to the South with longing eyes. The party visited the thrifty colony of Swedes and Norwegians at Fruithurst, Ala., also the Scandinavian colony at Thorsby, and were very much pleased with the testimony gathered from their fellow-countrymen who had located at those places.

A party of nine Northern colonists, arriving at Green Cove Springs, Fla., the middle of August, were amazed to find the climate much pleasanter than it was at their homes in the North, and they were so well

impressed with the situation that they have begun to make selections of lands for garden farms, vineyards and pear orchards. The "Southern States" has always maintained that the only way to get an accurate idea of summer temperature in the South is for Northerners to go South in midsummer, and the experience above mentioned is simply a proof of the soundness of this contention.

Under authority from the legislature, a census of Florida was taken in 1895, and statements regarding the population shown thereby have just been published. According to this enumeration, there has been an increase of 18.7 per cent. in the population as compared with 1890, the summary being as follows:

	1890.	1895.	Inc.
White .....	224,949	271,561	46,612
Colored .....	166,473	193,078	26,605
Totals .....	391,422	464,639	73,217

Between 1880 and 1890 the increase in population was 121,929, so that the increase of 73,217 in the succeeding five years is a very gratifying showing. It will be noted that the increase in white population has been very considerably greater than of the colored, the percentage of increase being 20.7 white to 15.9 black.

A Chicago party has been in Orlando and other portions of Florida making investigations looking to the location of a colony of German farmers.

# GENERAL NOTES.

## **An Unscrupulous Vilifier of the South.**

The Chicago Times-Herald recently published a letter from Georgia setting forth that the great Northern colony established at Fitzgerald had proved a failure; that sickness, death and dissatisfaction had greatly thinned out the population, and that those who hold on need expect nothing in future but a dreary system of slavery to debt. The article was flagrantly false throughout. The correspondent cannot plead ignorance in defence of the charge of malicious slander, for the reason that any investigation would have shown that there was absolutely no foundation for his statements. Moreover, the same or similar slanderous stories, published several months ago in a Northwestern paper, were shown to be false, and the testimony in demonstration of this could not have failed to reach the notice of this Times-Herald correspondent, who is a writer on a leading Georgia daily newspaper. It is no doubt this fact, by the way, that gave him access to the columns of the Times-Herald. Being a Southerner and a member of the staff of a well-known and highly-regarded newspaper, he is supposed to know what he is writing about and to be reliable. The articles he has been sending to the Times-Herald and other Northern papers are written presumably for the sake of the paltry recompense they bring in the sum paid to space-writers, and he thinks to make them salable by decrying the South. It is worth taking note of, that not a single statement he has made is supported by testimony or any attempt at proof. Every claim he makes rests on his simple say so.

The truth is, that the founding of Fitzgerald is the most marvelously successful achievement in the field of enterprise which has been seen in the South or anywhere else for years, and its condition today is one of pronounced prosperity. Not only are the present citizens of Fitzgerald enthusiastic over the situation, but there are promises

of very large accessions to the colony between September and January next. The town is full of life and activity. Arrangements are being made for a corn and cotton exposition to open September 8, a tourist hotel is being built, not less than fifty houses are in process of construction all the time, the price of real estate has advanced steadily, and numerous important developments are in progress. All summer new families have continued to arrive, a wagon train of eleven teams having been a feature of one recent day, and advices received by the colony company indicate a heavy immigration movement to the colony during the coming fall.

The editor of the "Southern States" has visited Fitzgerald, and he has constant information about it from perfectly competent, conservative and trustworthy sources, and he is in a position to say that the Fitzgerald colony is a thriving, promising enterprise, and is doing much better than could reasonably have been expected of an undertaking of such magnitude. A few months ago, after a personal visit to Fitzgerald, he wrote of it as follows:

"The success of this enterprise up to the present time, and its exemption from mishap, delay and disaster of every sort, is marvelous. Of course, there have been difficulties to contend with, and there have been minor drawbacks and trifling discouragements. The astonishing fact is, that these have not been greater. There has been some sickness, but very little, comparatively. It is amazing that among 7000 or 8000 people, including women and children, old and feeble persons, and some infirm and delicate ones, all subject to more or less privation, to insufficient shelter and to change of food and water following the fatigue of long travel—it is amazing, I say, that there has not been a great deal of sickness, and that there have not been a great many deaths. The fact that there has been so little



is a fine demonstration of the healthfulness of the locality.

"It is remarkable, too, that among so many people there have not been found a considerable number of disappointed and dissatisfied, and particularly when the present crude conditions are considered; but there have probably not been a dozen families that have cared to withdraw from the colony and go back to their old homes. The few cases of sickness that have occurred and the few disappointed colony members have been eagerly seized upon by those captious persons whose chief pursuit is to find fault with and rail at the plans of other people, and by certain Northwestern newspaper writers, and heralded as indications of disintegration, demoralization and collapse. It may be safely said that there is not anywhere an enterprise of any sort more full of vigor, vitality and promise than this Fitzgerald colony."

The Macon (Ga.) Telegraph said editorially in its issue of August 6:

"The Telegraph has watched the course of this wonderful new town in Wiregrass Georgia, and it is only a week since a member of the staff of this paper visited the town for the special purpose of satisfying us that the statements made as to its growth and conditions were true. The fact of the matter is that Fitzgerald makes a most remarkable showing; that the town is in a prosperous condition, and that the health record during the summer months has been excellent, considering the fact that the town has grown from the wild pine woods to a population of from 5000 to 6000 within the last eight months, and that the rush of population has been much greater than the promoters of the colony looked for during that time. Sworn statements show that during the month of July only eight deaths occurred in the colony.

"It is evident, from interviews with new settlers, taken at random throughout the town and on the small farms around it, that as a rule the people who have come to Georgia are very well satisfied. The town presents a most prosperous appearance, and notwithstanding the fact that the season of the year is not conducive to a spirit of energy, Fitzgerald gives evidence of a steady, substantial and vigorous growth.

"The directors of the colony have acted

honestly with the people, and have not misrepresented anything. For the last four months every effort has been made to prevent new members from coming in because of the danger of a radical change of climate and surroundings during the heated term. Notwithstanding this fact, the settlers continue to come in, and for miles around Fitzgerald, as well as in the town itself, building is going on.

"The directors of the colony confidently expect an influx of several thousand settlers before the opening of the new year. The representatives of the railroads indorse this expectation and say that reports from agents all through the West point to a very large exodus from the West to the South.

"Of course, it is to be expected that in the case of an enterprise and undertaking such as this there will always come with the rush of first settlers a number of people who expect to find a very different condition of things from what actually exists. For one reason or another they leave to return to their homes, and of course when they get back home are only too anxious to offer an excuse for their return, and will lay the blame on the colony. Then again, there always follows in the wake of great immigration movements an element that is objectionable to the people who are in earnest about making new homes for themselves, but that element soon disperses and is the first to spread maliciously false reports. These things have happened in the case of Fitzgerald, and the promoters of the colony make no secret of the fact that a percentage of the first population has left. Naturally, they are glad of it, because they neither want an element of discontent nor an element objectionable to the best portion of the community."

### A Magic City.

The newest magic city on the map is called Mena, and is in Pope county, Arkansas, half-way between Kansas City and Port Arthur, on the new Kansas City, Pittsburg & Gulf Railroad. Two months ago there was no town there at all. Today there are 3000 people, and they are coming in at the rate of fifty to 100 a day. The railroad has just been finished to the town, and it is booming at a rate which causes its friends to prophesy that within a year it will have a



population of 10,000. Investigation shows that these aspirations are not entirely without substantial foundation, as it is a well-known fact that the Kansas City, Pittsburg & Gulf Railroad opens up one of the richest sections from start to finish that is tributary to any railroad in the country, and Pope county, Arkansas, is one of the rich sections now first penetrated by a railroad. The resources of this county are varied, and the horticultural and agricultural interests are sufficient to justify a considerable trading point on these grounds alone. In addition, however, to these natural advantages, it is the intention of the railroad company to throw all the weight of its influence in favor of making this new town of Mena an important commercial and manufacturing centre for the entire section. The company is already building roundhouses, and a fine stone depot, and other improvements of a substantial character are being made. A picturesque surrounding is one of the attractive features of the location, a pleasing combination of mountain, vale and river scenery affording a picture of great beauty. The elevation is about 1200 feet above sea-level, and in point of healthfulness the locality is said to be unsurpassed. There are a number of springs near by whose waters possess medicinal qualities, and it is proposed to make something of a pleasure and health resort of the place.

An inaugural excursion has been arranged by the Kansas City, Pittsburg & Gulf Railroad for August 18, 19 and 20, the excursion train starting from Kansas City, which is distant from Mena 382 miles.

### **The Georgia Horticultural Society.**

The annual meeting of the Georgia State Horticultural Society, held at Griffin, in August, was an unusually well-attended and representative meeting, and indicates a gratifying increase in the interest manifested by Georgians generally in the extension of fruit culture throughout the State, already a very important industry. The horticultural interests of Georgia are susceptible of very much greater development, and the State's horticultural society is doing valuable work in this direction. The meetings of the society are devoted to the subjects of fruit culture in all its forms, and especially to new varieties, fruit diseases and

the adaptation of different localities to different varieties of fruit. The next meeting of the society will occur in August, 1897, at Savannah.

### **Col. Killebrew's Work for the South.**

The Nashville (Tenn.) American of a recent date contained the following letter:

"My attention has been called to an article in a magazine entitled, 'The Southern States,' written by Col. J. B. Killebrew. I am so much pleased with this able article that I wish, through your paper, to call attention to certain facts brought out by Colonel Killebrew, as I think it is of great importance to keep them constantly and prominently before our people. Colonel Killebrew says: 'Instituting a comparison between the States of Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North and South Dakota, Nebraska and Kansas, known as the North Central States on the one hand, and the States of Kentucky, Tennessee, Alabama, Mississippi, Louisiana, Texas, Oklahoma and Arkansas, known as the South Central States, on the other, some significant facts will appear and some startling conclusions reached. The figures used are from the census of 1890. The value of land, fences and buildings belonging to the 1,923,822 farmers of the North Central States was in 1890 \$7,069,767,154. The returned value of the farm products for the preceding year in these States was \$1,112,949,820, or 15.7 per cent. of the value of the farms and improvements.

"Now take the South Central States, and we shall find that the value of the land, fences and buildings on the 1,080,772 farms embraced in this group of States during the year 1890 was \$1,440,022,598, while the value of the farm products in 1889 was \$480,337,764, which is 33⅓ per cent. of the total valuation of the farms and improvements. The conclusion drawn from these figures is inevitable, viz, that the same amount of capital invested in farms and farm improvements in the South Central States will yield more than twice the per cent. on the investment as it would if invested in the North Central States.'

"These facts, as quoted by Colonel Killebrew, are remarkable, yet they are authentic, because they are taken from the census reports. Let us now inquire why it is that



the value of the product of the farms in the South Central States is  $33\frac{1}{4}$  per cent. of the value of the land and improvements, and only 15.7 per cent. of the value of the land and improvements in the North Central States? There are two reasons for this difference. One is, lands in the Southern States are not as high as they are in the Northern States, yet will produce just as well. The other reason is, the things produced on Southern farms sell for a better price than those produced on the Northern farms. When corn is worth thirty cents per bushel in the Northern States, it is worth forty to fifty cents per bushel in the South. When hay is worth \$6 per ton in the North, it is worth \$10 in the South. The question would naturally arise, why are these staple products of the farm worth more in the South than they are in the North? The answer is found in the fact that the South does not produce as much of these products as is consumed by her own people, while the North must find a foreign market for her surplus. All the lands of the North are planted to hay, wheat, oats and corn, while we plant our lands to hay, wheat, oats, corn, cotton, rice, tobacco and sugar-cane.

"If all our lands in the South were planted to corn, hay, wheat and oats, it would lessen the price of our corn, wheat, oats and hay, because we would make more than our people could use, and the surplus would pull down the price of all.

"Such facts as these cannot be kept too prominently before the people. Colonel Killebrew, as emigrant agent for the Nashville, Chattanooga & St. Louis Railroad, is doing a great work for this section. He has done more to attract the attention of Northern farmers to Tennessee and Alabama than all else that has ever been written by others. His work is beginning to bear fruit. We have had a number of emigrants to Lewis county from the North during the past twelve months. Only last week we had five well-to-do Illinois farmers with us looking at our lands. All were well pleased, and went back home to sell their farms to come to Tennessee, where they can get cheaper homes and escape the long, cold winters of the North.

"J. A. CUNNINGHAM.

"Kimmins, Tenn., June 19, 1896."

### The Atlanta & West Point Railway.

Moody's Magazine has an interesting sketch of Mr. George C. Smith, president of the Atlanta & West Point Railroad and Western Railway of Alabama, from which the following paragraphs are taken:

"Mr. George C. Smith is a practical and thorough railway man, and his present position as president and general manager of the Atlanta & West Point Railroad is a step higher in a long and successful career.

"He was born in Grantville, Washington county, New York, March 4, 1855. He graduated from Adrian College, Adrian, Mich., in June, 1877, and began his business career the same year as private secretary to the Governor of Michigan. This position he held till 1881, when he entered railway service as secretary to H. M. Hoxie, general manager of the International & Great Northern Railroad, in Texas, and retained this position until 1882. From 1882 to 1886 he was secretary to Capt. R. S. Hayes, first vice-president of the Missouri Pacific Railway, holding this position until 1890. In this year he was appointed assistant general manager of this system, and from 1893 to 1894 he held, also, in conjunction with this office, the position of general manager of the Kansas City, Wyandotte & Northwestern Railway.

"He received his appointment as president and general manager of the Atlanta & West Point Railroad and of the Western Railway of Alabama in 1894.

"The entire management of the railway has shown a marked improvement under his experienced hand and trained ability. He has improved the freight and passenger service, until the people along the line boast of having the best transportation facilities to be found in the South. The result is already being seen in the springing up of factories along the line, in the development of the fruit industry and in the growth of the cities and towns. The road holds a commanding position, and Mr. Smith thoroughly understands and fully utilizes its advantages.

"President Smith's financial statement for the last fiscal year shows the best year in the road's history. Both gross and net earnings are larger than they ever were before. The gross earnings for the year ending June 30, 1896, are \$533,838.51, an in-

crease of \$59,816.21. Net earnings are \$217,164.30, an increase of \$17,211.21 compared with the previous year.

"After the payment of interest and dividends the surplus amounts to about \$52,000, which has been invested in additional freight and passenger equipment, purchased and placed in service during the year.

"One of the striking features of the financial statement is the gain in the receipts of the passenger department. The passenger income for 1896 is over \$95,000 ahead of the corresponding period of 1895. Capt. John A. Gee, the general passenger agent of this line, has been so long in its service that he knows every mile of track, the wants of every patron along his line, and, it is said, almost every resident in his territory."

### **Texas Fruit in Chicago.**

Mr. T. H. Thompson returned recently from Chicago, where he has spent several weeks superintending the marketing of Texas fruit shipped by the firm from Tyler. He placed forty-two carloads of peaches on the Chicago market, and says that the returns were much better than expected, considering the dullness and depression in all lines of trade at that time.

The best result obtained by Mr. Thompson's trip was the demonstration that Texas peaches can compete with those from any State in the Union. Speaking of this, Mr. Thompson said: "Peaches shipped by our representatives from Tyler always found ready sale in Chicago, and were in much better demand than any other fruit of that class placed on the market. California peaches ranked as seconds in comparison with the Texas article, and on several occasions I saw our peaches sell for two and three times as much as those from the Golden State. I have always contended that this State could and did raise the best peaches grown in the United States, and was anxious for this opportunity to demonstrate it upon the largest fruit market in the United States.

"We have now made a reputation in Chicago, and if there is a good fruit season next year we expect to ship between 200 and 300 carloads of Texas peaches to that point. Growers around Tyler and other East Texas towns are now cultivating the very

finest varieties to be obtained, are learning all the latest methods of packing and handling, and will be prepared for a big business next year. Prior to this season only one or two carloads of Texas peaches were ever sent to Chicago. Hereafter the fruit dealers in that city will demand large shipments.

"Our peaches ripen earlier than those from any other section, and will retain their place on the market longer. Naturally the rules of supply and demand affect the market there as well as anywhere else, but taking it all in all the Texas fruit will secure a better price than any other. Some days it seemed that fruit from every part of the country poured into Chicago, and then, of course, prices were very low. We also shipped one or two carloads of peaches to Minneapolis, St. Paul and other Northern points, and received very encouraging letters from the dealers, who stated that the Texas peaches were the best they had ever handled.

"Practically every carload of fruit sent from Tyler arrived in good condition. They were shipped in refrigerator cars, sent by fast trains and not delayed in transit. If the general condition of trade had been better, prices would, of course, have averaged more, but money is just as scarce in Chicago as it is anywhere else. Of course, the fruit trade felt the effects of this, but our Texas shipments turned out much better than we expected."—The Post, Houston, Texas.

### **A Boston Journalist on the South.**

Mr. George A. Benham is a lawyer and journalist, of Boston, who has traveled all over the United States east of the Rockies, and visited nearly every leading city, studying social, economic and industrial conditions and writing extensively for leading papers. He has spent about eight months traveling in the South. Speaking of his investigations, he said recently:

"The West and Northwest are merely reproductions of the East, with such modifications as are incident to the settlement of a new country. But in the South things are radically different, and the conditions of life, of social economics, present an entirely new phase.

"The nature of the soil and climate, the character of the people and their manners



and customs, the colored race existing under peculiar conditions, the mode of conducting public affairs, the public and private institutions, and the sentiments of the people, all present to the Northern or other visitor a most interesting and instructive field for study. And this is especially true, because the South is in a transitory period, or in a state of evolution.

"An increased demand for raw products has been followed by improved processes of agriculture. New or abandoned lands have been worked through the aid of irrigation, and improved implements have been introduced. The result has been a vast gain in the amount, character and value of agricultural products and a vast enhancement in values of lands.

"The fruit industry of the South has attained enormous proportions and is a source of vast revenues. Circumstances are decidedly in favor of this industry, as well as truck farming. Florida suffered terribly by the freezing of the orange trees—a real blessing, since it caused a proper diversification of industries, but these are growing up again, and the quantity of that delicious fruit will soon be normal South. Meanwhile the farmers are raising vegetables, grain and producing other things available for home consumption. Georgia and Eastern Alabama are making wonderful progress in the raising of grapes, peaches, pears and the ever-delicious watermelon and cantaloupe, which are luxuries and promoters of health. The soil of these States is well adapted to fruit-raising. Northern Alabama and Southern Tennessee are the scenes of great and profitable operations in coal and iron, centering largely about Birmingham and Chattanooga. Mississippi is still a pastoral and agricultural State; so with Texas, largely. Louisiana is developing the rice and sugar industry, with excellent results. North Carolina and South Carolina are, as usual, large producers of cotton and corn, though manufactures are making rapid strides in those States.

"The fabrication of raw materials close to the places of production, increased by the powerful stimulus of cheap coal and labor and excellent transportation facilities, has largely changed the aspect of many localities in the South and vastly enriched the entire country."

### **Everything Tending Southward.**

The trend of things is now all toward the South. The farmers are coming and the manufacturers are coming, and whether silver is voted up or down the procession is going to move, and it will not be long before the wheels go round in every part of the South, which takes advantage of the movement and brings its resources before the people who are coming. This takes spirit and enterprise; it costs time, money and intelligent effort, and cannot be accomplished by mule shows, such as Vicksburg delights in. Colonel Powers, the indefatigable industrial commissioner of the Illinois Central, has been hard at work for the past few months, and as the result of his efforts a large number of new enterprises are being located, none of them, however, in Vicksburg. Among them are creameries, shirt-waist factories, sleigh-runner factories, stone quarries, fruit and candy package factories, planing mills and cotton-mill loom factories, and a great variety of manufacturing enterprises, more so than ever before. This diversity of the new enterprises is a source of satisfaction to railroad people, for the reason that it tends to diversify the labor, and the people where these new plants are located have an opportunity of making a living some other way than by manual labor in the fields, raising cotton and corn.—Southland, Vicksburg, Miss.

### **The Growth of Tampa.**

Among other evidences of the remarkable growth of the city of Tampa, Fla., in the last ten years, the statistics of the business of the Tampa custom-house are very striking. For the fiscal year ending June 30, 1895, the custom-house receipts were \$73.30, and the total receipts from the establishment of the custom-house up to that time aggregated 1438.28. So rapid has been the growth of the city's industries that the custom-house receipts for the fiscal year ending in 1890 were \$254,688.22, and for 1896, \$783,756.77. There has been a large increase every year, the aggregate receipts since 1885 having been \$3,453,415.73.

The people of Tampa naturally feel that the United States government should erect a handsome building in place of the meagre and unsightly structure which was



used when the business of the port was less than a hundred dollars annually, and is totally inadequate and unfit for the present volume of business, already exceeding a quarter of a million and growing at the rate of \$150,000 to \$200,000 a year.

On this point a writer in the Florida Citizens says:

"This array of figures argues well for the erection of a public building in this city, and if 10 per cent. of the amount paid into the treasury of the United States by this port should be allowed for such a purpose the people of Tampa would be quite well satisfied. No other city in the State can make so satisfactory a financial showing. Many excellent government buildings are to be seen in less deserving cities."

#### **What a Kansas City Trust Company and a Railroad are Doing in Behalf of Southern Development.**

Mr. A. E. Stilwell, president of the Missouri, Kansas & Texas Trust Co. and vice-president of the Kansas City, Pittsburg & Gulf Railroad, and his associates in these enterprises are doing a great work for the advancement of the entire Southwest and indirectly for the whole South. Looking to the upbuilding of the country tributary to this railroad system, his companies are carrying out active, broadminded plans that should be followed by every railroad and financial institution in the South. These plans are broad enough to prove of immense value to the entire South. In his efforts to awaken a widespread interest throughout this country and Europe in the development of direct trade between Europe and the West via Southern ports, and to attract men, money and manufactures to States through which this road passes, such as Missouri, Texas, Arkansas and Louisiana, Mr. Stilwell wrote to the Manufacturers' Record, of Baltimore, under date of July 7, as follows:

"We have watched with much interest the effective work you are doing in attracting attention to the South, in aiding in its industrial development, and especially the Manufacturers' Record's successful efforts to awaken a widespread interest, both in this country and abroad, in the upbuilding of Southern ports, as outlets to foreign markets for Western products. We would, therefore, take the liberty of

suggesting that you publish a special edition, to be devoted to the relation of Kansas City, as the central point between the West and South, to the development of direct trade through the natural and nearest outlet for Western products. This city is rapidly coming to the front as the concentrating point for a vast grain traffic destined for Europe through Southern ports, and the early completion of the Kansas City, Pittsburg & Gulf Railroad—the most important line that has been built during the late period of depression—will turn to the Gulf at Port Arthur an enormous Western export business, and practically begin a real revolution in the Southern trend of Western trade.

"If you will undertake as an immediate sequel to your New Orleans edition a 'Kansas City and Gulf Issue' our company will subscribe for not less than 10,000 extra copies, and carefully mail them to leading business houses, bankers, manufacturers, exporters and other desirable classes both in this country and in Europe. This company, on account of its allied railway and manufacturing interests to the southward, desire to have such facts as you would publish brought directly to the attention of the classes named. For the construction of the Pittsburg, Kansas City & Gulf Railroad and its terminals we have financed exceeding \$16,000,000, and as this great North and South air line will open up a region of vast resources—timber, mineral and agricultural—and give the West the shortest line to the Gulf, we will see that every one of the 10,000 extra copies ordered shall be put where it will do the most good."

Accepting this suggestion, the Manufacturers' Record will publish in September a special edition that will have the widest circulation throughout the North and West and in Europe. It will reach many thousands of the leading manufacturers and capitalists in this country and abroad, and must prove of very great value to the entire Southwest. Mr. Stilwell and his companies deserve the thanks of all interested in the welfare of this section.

Mr. M. V. Richards, Washington, D. C., land and industrial agent of the Southern Railway, is sending out a folder with information about homeseekers' excursions in August, September and October. On



certain dates, both one-way and round-trip tickets will be sold at reduced rates from the North and West to all points on the line of the Southern.

### **A Prosperous Georgia Canning Factory.**

The Oemler Canning Factory, on Wilmington Island, near Savannah, Ga., is turning out 5000 cans of vegetables a day. The Oemler factory employs at present eighty hands in the fields and in the factory.

The factory is now putting up tomatoes, okra and beans. Mr. Oemler has about sixty acres of land planted in tomatoes, about eight acres in beans and about seven acres in okra. The yield of tomatoes is between 500 and 600 bushels to the acre, making a total yield of 33,000 bushels. The okra crop is continuous from the time it begins until frost. The bean crop is now in its prime. The industry is in itself an interesting one. Besides the farm owned by Mr. Oemler, the factory furnishes a market for the truck grown by the small farmers on the island. All of the product of the factory is grown on the island. The majority of the employes own small patches of land which are planted in truck, and these supply the factory with vegetables. About one-half of the employes are women and children. The factory hands earn from seventy-five cents to \$1 a day. Some of the skilled hands, the cappers and processors, who work by the piece, earn much larger wages, some of them as high as \$4 and \$5 a day.

The factory markets the great part of its canned product in New York, although a large quantity of canned goods is sent West, principally to Chicago. The factory will begin canning oysters in October, and turns out then as high as 12,000 cans of oysters a day.

### **The Italian Colony in Arkansas.**

Readers of the "Southern States" will remember the Italian colony established last year in Arkansas by the late Mr. Austin Corbin, an account of which was published in the December number of the "Southern States."

Mr. F. W. Watkins, the manager of the colony, gives the following account of the present condition of the colony:

"It was feared at first that the Italians

would prove undesirable citizens, but just the opposite has been the case. They came to Sunnyside, took possession of the homes which had been prepared for them, and at once began working out their own salvation. The soil is very productive, and the energy they have expended upon it is now showing signs of abundant return, on which account they are very happy and contented. They have raised good crops of corn and some little grain. Cotton they have not troubled with a great deal.

"I have been in charge of the colony since it was first inaugurated, and I am convinced that they make as good citizens as one could wish for. This seems to be the opinion, too, of the people who live adjoining them."

Mr. Watkins says that only a few months after they came there application for naturalization papers was made, and they have all become regular citizens of the State. They are represented by Mr. Watkins as taking an active interest in all that concerns the welfare of the State, and really make intelligent voters. They have raised money for the erection of a church, and work is rapidly progressing upon the building. A priest has made his appearance in the colony, and schoolhouses have been erected, so that it is evident they are already in line with the advanced ideas of the day.

Mr. Watkins says that the Italians have become so much attached to their new home that every effort will be made by them to induce many of their friends in the old country to join them, and there is every indication of many more of their relatives and friends finding an asylum in this blessed land of liberty and freedom.

It is stated that the people of the section of country where these Italians are living have been watching the developments of the new colony, and are so well pleased with the character of the Italians as citizens that an effort will be made to have another colony established.

### **A Thrifty Florida Farmer.**

Mr. H. P. Gradick, of Geneva, Fla., has sixty-two hives of bees that are storing away honey very rapidly. He took out forty gallons of honey the last week in July and expected to take out fifty gallons the next week. He is a successful farmer, and has raised his supplies at home since the



freezes of the winter of 1894-95. He has just harvested a fine crop of corn, and saved enough fodder to feed his stock for another year and still have some for sale. He makes his own meat at home, and this, with chickens, eggs, butter and milk, enables him to live like a prince. He had a fine grove prior to the freeze. He has budded his frozen trees, and now there is a fine, new growth, which gives promise of bearing next year.

### **Louisiana as a Field for Immigrants.**

A writer in the Leeds (England) Mercury says: "In Louisiana the peculiarities and characteristics of Southern life are more accentuated than in Georgia or the two Carolinas; the 'older South' is more in evidence there, and the emigrant who makes up his mind to settle there has not only to attach himself to the land, but to the habits and customs of the people, with whom there still lingers much that is French, with something that is Spanish, and an easy-going negro population that cannot be overlooked or set aside. The climate compares favorably with that of California and Oregon. In the hottest weather the cool Gulf breeze tempers the heat. I have had placed at my service a letter from a resident of Millersville, La., to a friend in Dakota, which presents a few interesting points regarding the life of a settler in Southwestern Louisiana. It is dated December 15, and says (inter alia), 'When I read of 30° below zero and no coal I shudder, and wonder if I really was ever there. We have had a few frosts, the grass is green, and cattle and horses on the range are fat and sleek. I am writing in a room without fire and doors open. We don't fear a coal famine; we can go and get enough fuel to last a week in an hour's time and it won't cost a cent. We live on as beautiful a prairie as ever lay out of doors. Magnificent timber of all kinds on either side within a mile and one-half. Good fence lumber cost \$7 per 1000 feet, and health is as good as in Dakota. Abundance of wild fruit from March to August. Peaches, nectarines, figs, apricots. Japan persimmons are propagated from cuttings and come into bearing in two years. Pears begin to bear in from three to five years, and this is the home of the best. These prairies produce grass to beat the world; will average more

to the acre than ten acres in Dakota. There have been thousands of tons of hay shipped this fall at prices that net more cash than a Dakota wheat crop. These are some of the things that strike a Dakota man favorably. I could tell you of some things not quite so pleasant, but nothing to compare to a straw fire. This country is filling up with Northern people, property is advancing in price every day, and I have the first Northern settler yet to see who wants to spend the winter in Michigan. Horace Greely said, "It is easier to raise a steer in Texas than to raise a hen in Maine," and I am not sure but it is cheaper to raise a whole herd of cattle here than to pull one old cow around by the horns, hunting for water and fresh grass in Dakota. Nothing but extreme poverty drove me out of Dakota, and now I do thank the good Lord for one spell of poverty, and that by contrasting this with Dakota I can the more enjoy the glorious weather, the beauty of the landscape, etc. How we can laugh at the storm and the coal dealers and the straw pile; how we can luxuriate on the sweet potato, rice, poultry, eggs, sugar and syrup, corn bread, beef at five cents per pound, etc., all of home production. Here, if we can't buy shoes, we can be independent, and go barefoot and never think of freezing.'"

### **State and United States Lands in Mississippi.**

The State of Mississippi has for sale about 500,000 acres of land. This land is divided into three principal classes:

First—The Chickasaw school lands, about 30,000 acres, held at \$6 per acre. These lands were selected by agents of the State prior to 1850 from the broad domain of the general government, which at that date embraced three-fifths of the entire lands of the State, and it is reasonable to suppose that the State's agent located the best. They were mainly located in the delta on lands bordering on the delta, and were intended for agricultural purposes.

Second—Forfeited tax lands, about 300,000 acres, held at one-half of their assessed value, are lands forfeited and sold to the State for non-payment of taxes. The law requires that the land remain in the auditor's office for two years after sale to the State, during which time they are subject to redemption by the owner; thereafter



offered by the land commissioner for sale at the prices above stated. These lands are scattered all over the State and in nearly every county.

Third—Swamp lands, about 150,000 acres, held at \$1.25 per acre. These are lands granted the State under the act of Congress approved September 28, 1850, and the acts amendatory thereto. These are strictly timbered lands and located in the southeastern portion or pine belt of the State. The name "swamp land" is a misnomer, as there is little, if any, of the land of a swampy character, the lands having been given to the State in lieu of lands disposed of by the government which were of a swampy character, and bought from the government for the sake of the fine cypress and other timber which covered them at that time.

In addition to the foregoing, the Congress of the United States has granted to the State university and agricultural colleges of the State some 70,000 acres of land, which has been selected from the finest pine lands in the South, and are for sale or lease by the trustees of the various institutions of learning.

The United States has about 800,000 acres of land in Mississippi, chiefly in the southern portion of the State. These kinds are finely timbered, as a rule. They are subject to homestead, as in other States.

### Another Western View.

A factor has arisen in hog-raising that will tend to greatly broaden the industry. For a century the South has furnished a good market for Northern-grown pork. All that old-settled region lying south of the Ohio and east of the Mississippi has always been a large consumer of Northern pork. Its agriculture, during the slavery period, ran almost entirely to the two great staples, cotton and tobacco. Live stock was neglected, and is still neglected markedly. One can travel hundreds of miles by rail in the South and never see a stock car or a stock-yard. The older farmers of the South have not yielded to new conditions, and have not materially departed from the customs of the past. They have gone on raising cotton and tobacco, and have barely subsisted. Today, with the exception of horses and mules in Kentucky, not one of the States of the old South equals either of the Dakotas in production and value of

live stock. Yet the natural advantages of the South for profitable swine-raising are superior to those of the North. So favorable are the conditions in some portions that wild hogs flourish in droves. While the South naturally lacks the nutritious grasses of the North, it is richer in mast, and is capable of producing clover and other forage crops that will equal any grown in the North. It has climatic conditions, too, which will make it possible to produce pork there much cheaper than in the North, to say nothing of the present cheapness of the land, much of which can be made to rival Iowa and Illinois in corn production. These things have been noted by Northern farmers, and the tide of migration that has been westward since the early settlement of the country is now setting South. And with that migration is going the spirit and enterprise that will revolutionize Southern agriculture and stock-raising.—*Western Swineherd.*

It is quite true that for many years after the war the South raised cotton almost exclusively, but it is not accurate to say that this was the case before the war. No part of the United States had a more diversified agriculture than the South had up to the beginning of the war.

With one-third of the country's population, and only one-fourth of the white population, the South not only produced all the cotton, rice and sugar raised in the United States—these were all practically surplus cash crops—but also raised in 1860 358,000,000 bushels of corn, or 44 per cent. of the total crop of the country; 351,500,000 pounds of tobacco, against 77,800,000 pounds in the rest of the country; 38,600,000 bushels of sweet potatoes, out of a total crop of 41,600,000 bushels; it had over 40 per cent. of the total value of live stock of the country, or \$467,498,000 out of \$1,100,000,000; it made 16,000,000 gallons of molasses, against 22,000 made by other sections; it produced beeswax and honey to the extent of 13,500,000 pounds, or over one-half of all made in the country; the value of the animals slaughtered was \$84,400,000, against \$128,000,000 in all other sections combined, and out of a total value of what were classed as "home-made manufactures" of \$24,300,000 the South had \$16,500,000. In 1860 the whole country raised 15,000,000 bushels of beans and peas, and



of this quantity 11,800,000 bushels were produced south of Mason and Dixon's line.

These figures are taken from the book, "Facts About the South," by R. H. Edmonds, editor of the Manufacturers' Record, by whom they were compiled from such official sources as the United States Census Reports and Reports of the United States Agricultural Department. They are given in "Facts About the South," along with statistics of other products, in the following tabular form:

Crops in 1860.	Yield in South.	Yield in Remainder of Country.
Corn, bushels.....	358,153,000	472,297,000
Wheat, bushels.....	44,800,000	125,200,000
Cotton, bales.....	5,196,000	None
Tobacco, pounds.....	351,500,000	77,800,000
Rice, pounds.....	187,000,000	None
Sweet potatoes, bushels...	38,000,000	3,600,000
Sugar, pounds.....	302,000,000	None
Value of live stock.....	\$467,498,364	\$639,991,852
Molasses, gallons.....	16,314,818	22,232
Beeswax and honey, lbs...	13,551,151	12,835,704
Value of animals slaughtered.....	\$84,447,110	\$128,424,543
Value of home-made manufactures.....	\$16,580,281	\$7,672,941
Peas and beans, bushels...	11,878,452	3,309,661
Wool, pounds.....	12,565,337	47,946,006
Cash value of farms.....	\$2,308,49,352	\$4,330,004,869

Mr. James Brown, one of Michigan's largest celery-growers, will undertake the growing of celery on a large scale in Florida. It is said that Mr. Brown raised celery at a point near Kissimmee last winter and netted \$3000 off one acre.

The Georgia & Alabama Railway issues an announcement of an arrangement for settlers' and homeseekers' tickets. The dates mentioned on which excursion rates are in effect are August 4 and 18; September 1, 15 and 29; October 6 and 20; November 3 and 17.

Mr. E. W. La Beaume, the general passenger and ticket agent of the Cotton Belt Route, has issued a pamphlet descriptive of lands for sale along the line of that railroad, and in some respects this little pamphlet is unique. It contains an unbiased description of farm lands in various counties of Arkansas and Missouri through which the line runs, and was compiled by a representative of the Cotton Belt Route, who made a canvas of the territory traversed. In each case a local land agent is mentioned to whom inquiries may be addressed, and while guaranteeing the responsibility of the

agent named, the Cotton Belt Route disclaims any interest in the sale of the land other than the settling and upbuilding of the country tributary to its lines.

A well-organized effort to direct immigration to Southern Virginia is evidenced by the appearance of the Homeseekers and Investor's Guide, a new publication emanating from Lawrenceville, Va. In the issue at hand particular attention is called to the merits of the new colony of Reigate, on both sides of the Atlantic & Danville Railroad, in the counties of Brunswick and Greenville, Virginia, containing some 20,000 acres of land, the property of the Atlantic & Danville Land Co. The location is about eighty miles west of Norfolk, and is in the famous trucking section and the bright-tobacco belt of Southern Virginia. The plans of the land company have been well matured, and the effort to attract Northern and Northwestern settlers to this locality will be industriously and intelligently carried forward.

The commissioner of agriculture of Tennessee, Nashville, has issued a valuable geological, division and county map of the State.

The map is folded in pamphlet form, making a fold of thirty pages. On the obverse side the thirty pages are used in telling a story of the resources, capabilities and possibilities of the State.

There are two maps on the face of the sheet; one is a colored map of the counties, and the other is a highly-tinted topographical chart, which shows the products, etc.

The passenger department of the Louisville & Nashville Railroad Company has just issued a very interesting 100-page book under the title of "Garden Spots." It will be sent to applicants, on receipt of ten cents, by Col. C. P. Atmore, passenger agent of the Louisville & Nashville road, Louisville, Ky. The book contains maps, descriptions, accounts of resources, capabilities of soil, etc., of various counties through which the line passes in the States of Kentucky, Tennessee, Alabama, Southwestern Mississippi and West Florida.

The projectors of the Fitzgerald colony have initiated another large undertaking.



The propose to take 10,000 acres of land in Wilcox and Irwin counties, Georgia, the same section in which the colony is located, and convert it into a great fruit farm for raising peaches, pears, plums, grapes and other fruits that may prove profitable.

Manager C. L. Post, of Parlin & Orendorff Co., returned last week from quite an extended trip in the South, and comes back more firmly than ever in the belief that that territory is destined to take a front rank in general agriculture. Never before have the people seemed to be so fully awakened to the great possibilities of the South as a farming country, which is shown in the desire to discard old back-number implements and machines and take up the latest and most improved. No longer are the farmers content to seed their lands to one staple and then send their money elsewhere for breadstuffs and bacon. They realize that they can grow to perfection many crops that were for years regarded as being profitless in the South, and a new era of farming has set in that calls for a variety of implements that a few years ago were never seen in that country. It is a vast field that implement-makers will find very profitable from now on.—Farm Machinery, St. Louis, Mo.

## CORRESPONDENCE.

### Culture of the Pecan.

*Editor Southern States:*

The very interesting article on the pecan in your issue of July is timely, and of great value now, as so much interest is being taken in growing the pecan for profit.

Not only are people planting a few pounds for their own use, but already movements are on foot to plant them for commercial purposes by hundreds of acres, as they do of the English walnut in California.

No American nut tree can be planted that has so few insect enemies; also being practically unaffected by seasons, blights or markets, a universal favorite, large demand and as yet but little seen outside of the United States. With cultivation the pecan will grow four or five times as fast as when growing without, coming into bearing in six years, paying at eight and ten years, continuing to increase until thirty years old, continuing in bearing for hundreds of years. It

is a rare thing to see in our pecan forests a tree blown down or dead. As a rule the cultivated pecan bears annually, some seasons more than others. Their yield of nuts varies according to the soil and care of the trees. We have cultivated trees here which earn their owners from \$50 to \$80 per tree year after year. A grower in Florida says he has sold the product of one tree at \$140. Another party says he has paid \$248 for the crop of one year upon one tree. Passing by such great yields of individual pecan trees, an orchard, planted 20x20 feet apart, at only \$5 per tree (fifty pounds at ten cents), would yield \$630 per acre, besides what can be earned from crops grown between the trees. It is not generally known, but somewhere in this State there have been grown dwarf pecan trees, and probably they exist still.

In 1853 John Le Conte presented to the Academy of Natural Sciences of Philadelphia a unique pecan, which he named "Hicoria Texana," and of which he said the habit was to grow ten or twelve feet high. Similar pecan nuts were received by the Department of Agriculture at Washington as late as 1890.

Much has been learned about the growing of pecans the last few years, which is of great advantage to those beginning now to plant. It has been thought that being a wild tree, we must pursue nature's method of planting.

A grower of long experience here in Texas says: "No more costly mistakes have I made than in trying to follow nature in raising the pecan. Every agricultural success has been achieved by overcoming nature's efforts to defeat it."

With reports from many who planted the nut in the field, where tree was to stand, of destruction by squirrels, moles and rats, I advise a much cheaper and safer plan, which is this: In your garden throw up a bed, plant the nuts and the following fall transplant to permanent home, which is easily done by removing all the earth to the bottom of the roots, when they can be moved without loss of a fibre. This plan gives the young trees your daily observation and care during their first year's growth, and plenty of time to prepare the ground for their permanent home.

The California tree planters have learned how to plant the largest number of trees to



the acre without crowding, and have generally adopted what they call the equilateral triangle method, which permits the planting of seventeen more trees to the acre, 20x20 feet apart, than by the square method. The selection of seed is very important; as in the coming years as now, the demand is for the finest nuts grown, not only size, but flavor of parent nut, together with the prolificness of the parent trees. If a choice pecan cost you ten cents each, it would be a good investment to plant. This need not be, however, as the best Texas thin-shell pecan need not cost over \$3 per acre. There is and may be always a dispute as to cutting the tap root of the pecan. Some say one way, some another, but the preponderance of testimony says don't cut the tap root. This is the life of the tree, and cannot be re-stored if once cut. Brace roots will grow, the tree will make a handsome shade tree, but as for nut-bearers, they are not of success equal to those trees which have a perfect and whole tap root.

The question of grafting and budding pecan trees is also in dispute, being unlike pear, peach, apple and other such trees. I don't say it cannot be done, but many doubt it, and as yet but little evidence of success has been made to show that it has advantages over planting the nuts.

At any rate, the cheapest, safest and the best plan is to plant the nut, and as the years go by experiment with grafting and budding if you desire. In the meantime your seedling trees are doing well, whatever may result from your experiments.

A great interest is also being taken in planting groves of the Japan mammoth sweet chestnut, which is the largest chestnut grown, the nuts often measuring four to six inches in circumference, and weighing twelve to sixteen nuts to the pound; mature easily without frost. In the Southern States they are ripe in August, and early shipments to the Northern markets sell from \$10 to \$15 per bushel. At that time no other chestnuts are in market, and they take the cream of prices. The trees are dwarf, begin to bear at two and three years old, paying well at five years from planting the nut. They have no off years. The Japan walnut, which has a flavor much like our butternut, is becoming a great favorite also, as the trees bear heavily, and pay large profits in

growing them, better than the English walnut.

Nut groves bring fortunes, at a very small cost for outlay.

HERBERT POST.

Fort Worth, Texas.

### **Benefits of Immigration.**

*Editor Southern States:*

The efforts made by Southern railroad companies to induce immigration from the Northwestern to the Southern States has been with a view to the development of farm lands or the investment of capital in industrial enterprises, and the success of these efforts has been based largely on the number of actual farmers and the number of factories actually located in the territory advertised. There is, however, another advantage to the railroads and to the South, which has grown out of this immigration movement, and in the near future will become a source of revenue to the railroads and a real joy to thousands of people. I refer to the numbers of Northern families who have been attracted to Southern points on the line of the Illinois Central Railroad, through the persistent advertising of a mild winter climate and the opportunities for winter homes in Northern Louisiana, Mississippi and Tennessee. Every year adds to the numbers of well-to-do people in the North who are purchasing lots and building pleasant cottages at different points in the South, with no other thought than that of having a home in which to spend four or five of the winter months away from the frosts and snows of the North. But we find these fortunate and happy people cannot resist the opportunities for real estate and other investments, and in nearly every case before a single winter has passed they are in some way connected with the agricultural, industrial or commercial interests of the South.

The South needs permanent residents, it is true, and the more she can have of them the better. But, in our efforts to secure such, we should not lose sight of the fact that nature has furnished an ideal winter home in the South, and that the modern railway facilities and quick schedules have brought the North and the South so close together as to make it possible for the Northern farmer or business man to con-



duct his affairs from his winter home in the South.

A thousand Northern families, owning and living in Southern homes, means vastly more to the South than the trifling living expenses of each, and one of the direct benefits from soliciting and advertising for immigration from the North to the South is a movement in the direction indicated.

J. F. MERRY.

Manchester, Iowa.

## BOOKS AND MAGAZINES.

The Review of Reviews for August, while largely given over to the issues of the Presidential campaign, finds space for the treatment of other important topics. Besides the character sketch of Mr. Bryan, the democratic candidate for the Presidency, the Review has illustrated articles on Harriet Beecher Stowe and Dr. Barnardo, the father of "Nobody's Children." There is the usual elaborate resume of the current magazines, and the departments of "The Progress of the World," "Record of Current Events," and "Current History in Caricature" answer the typical American demand for what is up to date and "live."

Seldom is so much delightful fiction presented in a single issue of a magazine as is invitingly arrayed in the short-story issue (August) of the Ladies' Home Journal. With the best contributions of such clever story writers as Bret Harte, Jerome K. Jerome, Sarah Parr, Lilian Bell, Jeannette H. Walworth, Caroline Leslie Field and Annie Steger Winston, the illustrations of such capable artists as W. L. Taylor, T. de Thulstrup, Alice Barber Stephens, Otto Toaspen, Florence Pearl England and Clifford Carleton, divide attention and interest. Among a number of valuable articles is one on "Headaches and Their Cure," contributed by four eminent physicians, who diagnose and prescribe.

The August number of Harper's contains the first part of a new serial story by Mark Twain, entitled "Tom Sawyer, Detective;" a paper on "The White Mr. Longfellow," by W. D. Howells; "Stuart's Lansdowne Portrait of Washington," by Charles Henry Hart; "Peeps into Barbary," by J. E. Budgett Meakin, formerly editor of the Times

of Morocco; "The Strange Days that Came to Jimmy Friday," by Frederick Remington; "Doorstep Neighbors," by William Hamilton Gibson; the second part of Langdon Elwyn Mitchell's "Two Mormons from Muddlety;" "Postes et Telegraphes," by Quesnay de Beaurepaire; "Her Prerogative," by E. A. Alexander; "Miss Maria's Revival," by Sarah Barnwell Elliott; "The Mayor's Lamps," by John Kendrick Bangs; "The Wreck of the Columbia," by Prof. Simon Newcomb; "The Silent Voice," a poem, by Lawrence Alma-Tadema; short poems by Archibald Lampman and Arthur Sherburne Hardy, and the regular editorial departments.

The instalments of Mr. Howell's serial story, "The Landlord at Lion's Head," will be a feature of distinction in Harper's Weekly during the present month. The democratic convention at Chicago will be fully discussed, and important articles on the war in Cuba may be expected.

The successive August numbers of the Bazar will be especially attractive to readers who enjoy outdoor life, and who cultivate acquaintance with nature in her various moods. "Birds in Midsummer," a charming study, by Caroline A. Creevy; "A Feathered Ishmaelite," by Marion Harland, and "The Story of a Duck Farm," by Ruth McEnery Stuart, will be given. For those who enjoy fancy work, there are several papers on "Summer Embroidery," by Candace Wheeler, and the series on "Household Decoration," begun in July by Mary Artois, will be continued through August.

The fiction number (August) of Scribner's Magazine contains six short stories and a little comedy, in addition to several special articles of wide popular interest, including the first paper in Mr. A. F. Jaccaci's picturesque account of his journey "On the Trail of Don Quixote," and Mrs. Alice Morse Earle's "Old Gardens," describing the old-fashioned flower-gardens that still persist in some New England villages.

Artistically, this issue contains several features new to magazine audiences. Vierge, the great French illustrator, seldom seen in periodicals, has made twenty-five drawings for the Don Quixote article that are his very best work. Miss Cecilia Beaux, an

THE  
SOUTHERN STATES.

SEPTEMBER, 1896.

THE HILL COUNTRY OF FLORIDA.

*By Albert Phenix.*

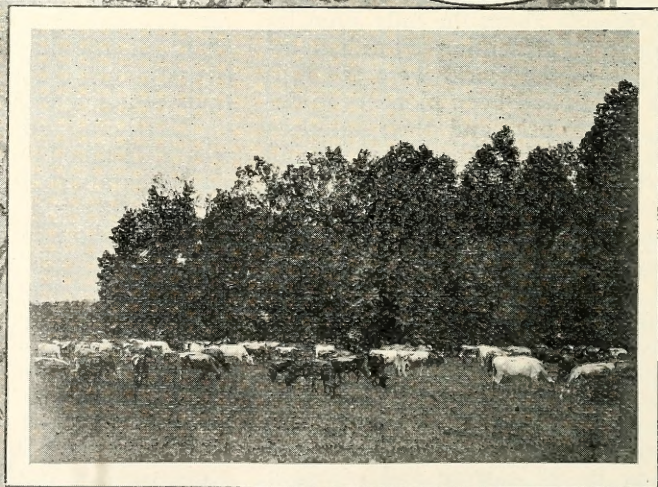
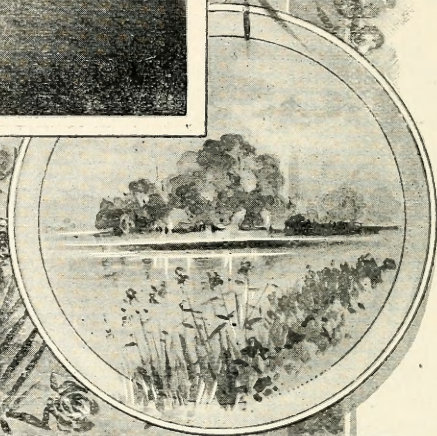
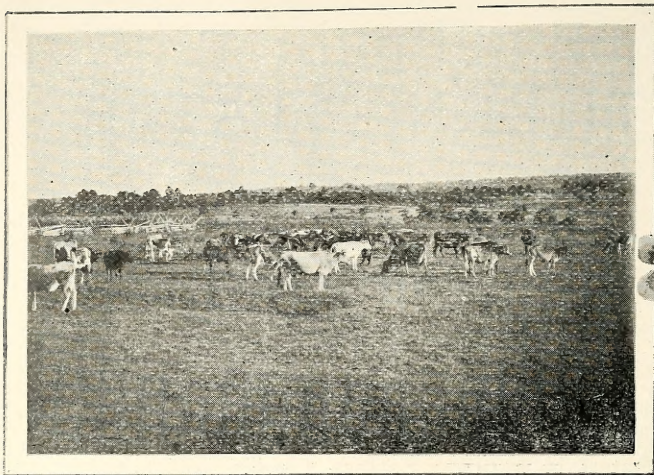
Singularly enough, to many people the "hill country" of Florida is an unknown region, the popular conception of the State being that it is wholly made up of low, flat, sandy lands or undrained swamps, and yet Tallahassee, in the very heart of the hill country, has occupied a position of prominence as the capital of the State ever since 1824.

No doubt the activities of railroads and capitalists interested in the development of the peninsular portion of the State are responsible for the prevailing impressions of Florida as a whole. For until recently about the only agencies engaged in presenting Floridian attractions to the world were the railroads which had been pioneers in development work, and their interests did not lie in the direction of the hill country, and as the big hotels caught the crowds of tourists and their route to and from home did not take them through the middle-western section, most visitors carried away with them occasional confirmation of their preconceived notions about the flatness of Florida. And so the pathway originally marked out has been followed year after year, and nearly all Florida settlement, as well as travel, has found its way to the eastern and southern parts of the State. Jacksonville was the original objective point, and from here the tide has reached every year farther and farther south, until now the peninsula has been occupied throughout almost its entire length. Thus it has come about that the Flor-

ida peninsula is commonly looked upon as constituting Florida, and the soil, flora and physical features of Eastern Florida are supposed to be characteristic of the entire State. As a matter of fact, that part of Florida west of the Suwannee river is, as to a large part of its area, a contradiction of nearly all the prevalent impressions concerning the State.

Only within recent years has any general attention been attracted to this favored section of the South, but now that its varied advantages are becoming more widely known, it bids fair to come in for a more generous share of the immigration which is pouring into the South from all portions of the country. The experience of Northern and European settlers who have taken up their abode in this section is a strong factor in inducing their neighbors, friends and acquaintances to follow in their footsteps, for their testimony is with one accord an enthusiastic endorsement of the climate, the soil, the people and every feature of the location. Although this may be denominated the "far South," in which broiling heat and bodily discomfort and ills of many sorts might be popularly supposed to accompany a residence here during many months of the summer season, the testimony of Northern settlers and the records of the weather bureau prove that the summer heat is less oppressive than in most places a thousand miles further north. Children, as well as adults, are less subject to





THE HILL COUNTRY OF FLORIDA IS ADMIRABLY SUITED TO STOCK-RAISING.

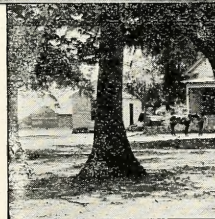


summer afflictions than in the North, while the nights are refreshed by a continuous cooling breeze which sweeps up from the waters of the Gulf of Mexico. Rev. S. M. Provence, the pastor of the Baptist church at Tallahassee, recently wrote to a Northern friend:

"To those who know, the summer in Florida is its most enjoyable season. From Tallahassee to the Gulf of Mexico, the distance 'as the crow flies' is about twenty-five miles. The Gulf breeze never fails us. A sultry night, such as you often have in the North, is unknown here. When I

without fertilizing. Though the better lands have been taken up for a great many years, they were formerly held in large tracts by slave-owners, and with changed conditions following the war have passed into other ownerships. Much of this land is practically virgin soil, and a great deal of it is heavily timbered. The prices of land range ordinarily from about \$5 to \$30 per acre, according to improvements and accessibility to railroads, and it is the advice of immigration agents that small holdings, well cultivated, are, under ordinary circumstances, the most desirable.

This is a fine grass and grain country. All the conditions are pre-eminently favorable to stock-raising and dairying. Horses, cattle, hogs and sheep are very successfully bred and handled at small cost. Poultry farm-



REPRESENTATIVE FARM HOMES IN THE  
FLORIDA HILL COUNTRY.

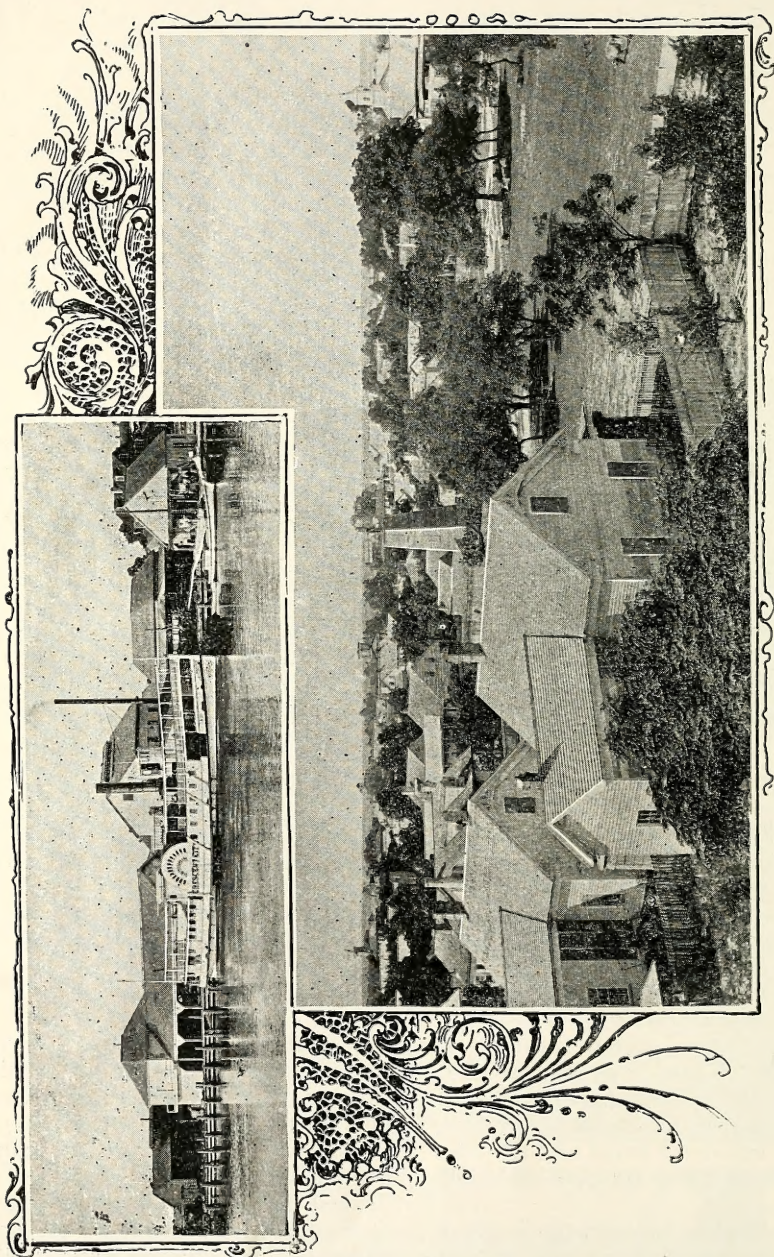
first came to Tallahassee to live, I swung a hammock betwixt two oak trees and attached a table (of my own design) to one of them. Their circle of shade I called my 'study.' I found it impossible to write there in comfort on account of the constant breeze. It is this which makes our summers so charming. Then, too, the rainfall, especially in the latter part of the summer, cools the atmosphere, and we have the summer's fruits and the odor of its flowers, and its cool, delicious nights."

The soil of the hill country in Western Florida is generally a rich, reddish or chocolate loam, with a red or yellow clay subsoil, and of such great fertility that in many cases lands have been cultivated for forty to sixty years

ing is likewise an industry yielding satisfactory returns, and chickens, turkeys, etc., are raised in large numbers for the home and export markets.

The wide diversity in agricultural products of Western Florida is evidenced in a more striking manner than otherwise possible by an examination of the published statistics of the State, compiled under the direction of the State board of agriculture. In order to show the variety of products, a compilation is herewith given cov-





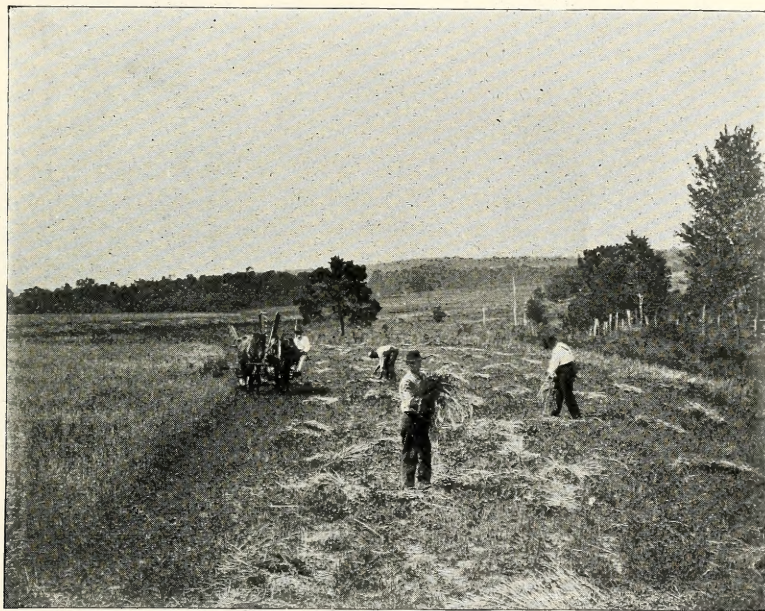
APALACHICOLA.



ering the whole western section, and comprising the counties of Calhoun, Escambia, Franklin, Gadsden, Hamilton, Holmes, Jefferson, Lafayette, Leon, Liberty, Madison, Santa Rosa, Suwannee, Taylor, Wakulla, Walton and Washington: Corn, 1,765,006 bushels; rice, 13,600 bushels; hay, 3267 tons; cotton (upland), 21,682 bales; cotton (Sea Island), 9165 bales; sugar-cane, 33,243 barrels syrup, 73,377 barrels sugar; oats, 495,773 bushels; field peas, 80,721 bushels; millet, 362 tons; peanuts, 402,137 bushels; tobacco, 652,976 pounds; cabbage,

900,440 pounds; wine, 13,549 gallons; turkeys, 12,171; geese, 10,850; ducks, 4665; chickens, 449,120; eggs, 691,138 dozens; milch cows, 15,205; milk, 1,201,122 gallons; butter, 347,504 pounds; cheese, 989 pounds; hogs, 115,250; goats, 9080; sheep, 81,564; stock cattle, 117,551; mules, 4219; horses, 13,655.

The testimony of a dairy farmer named M. N. Johnson, whose place is located near Tallahassee, may be given as showing what one man with energy, but no capital, has succeeded in doing:

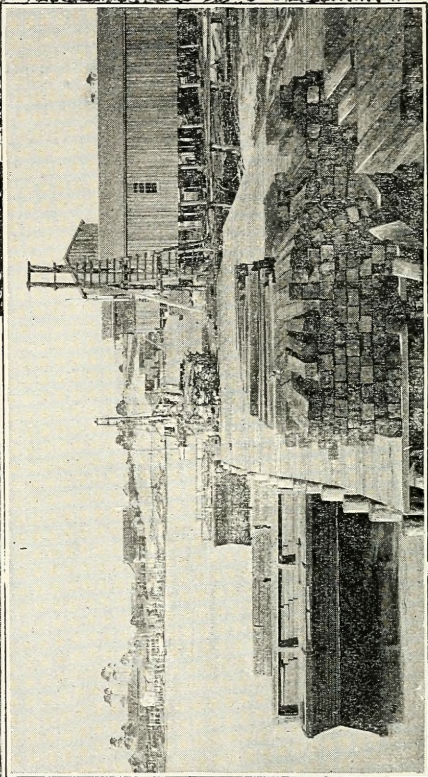
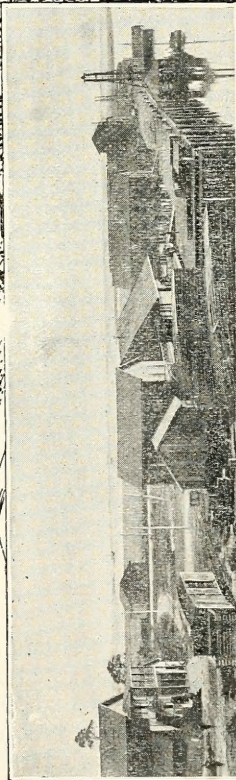
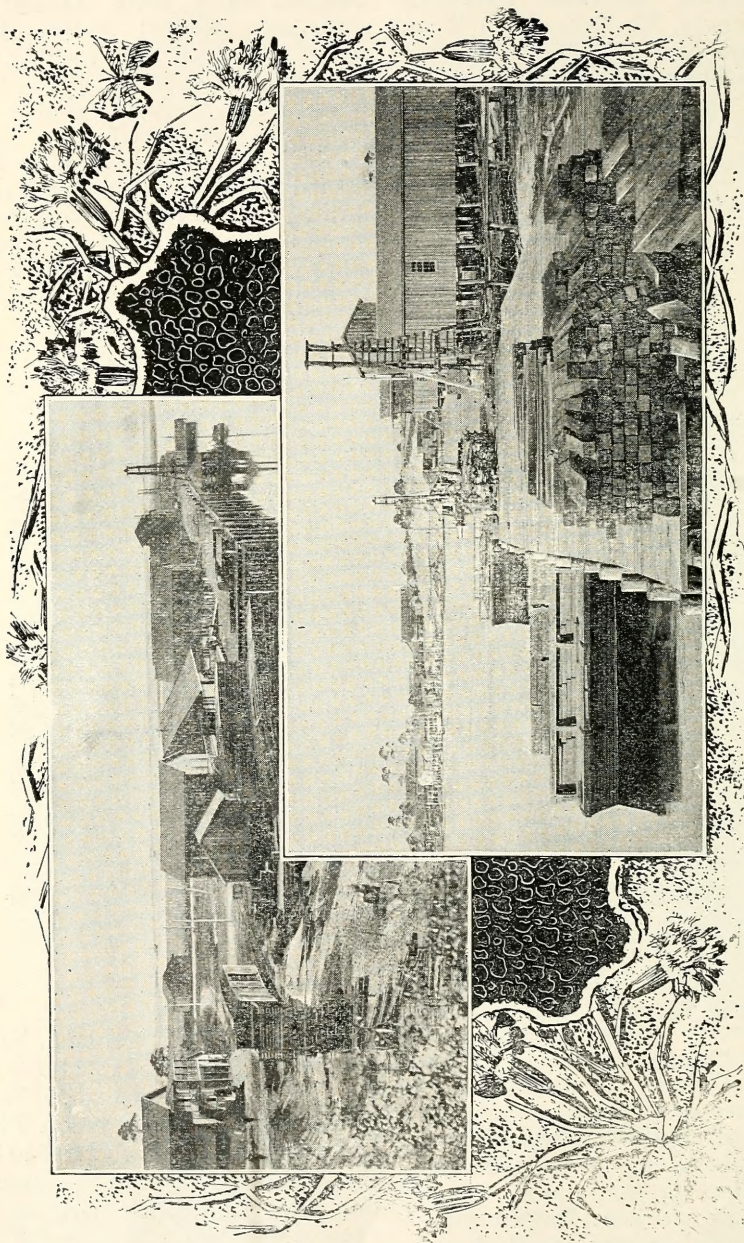


A WEST FLORIDA HARVEST SCENE.

10,799 barrels; tomatoes, 11,342 barrels; squashes, 10,181 barrels; cucumbers, 6671 crates; cantaloupes, 2033 barrels; beets, 9057 crates; sweet potatoes, 791,507 bushels; Irish potatoes, 26,776 bushels; egg plants, 1828 barrels; beans, 32,379 crates; water-melons, 549 carloads; English peas, 25,258 crates; oranges, 29,284 boxes of 126; peaches, 68,866 bushels; pecans, 1668 bushels; pears, 22,762 barrels; strawberries, 10,500 quarts; wool, 190,357 pounds; honey, 279,817 pounds; figs, 2527 bushels; grapes,

"I have 2000 acres of land, but rent a portion of it. I planted 200 acres of corn and gathered 3000 bushels, which, in 1894, yielded \$1800. Planted forty acres of oats, gathered 820 bushels, yielding \$560. Put the same land into peas, 320 bushels, yielding \$160. Grazed fifty-four cows on the same land in two weeks, obtaining ten pounds of butter per day, yielding \$48. Also planted crab-grass, sugar-cane, rice, and received as the total proceeds of my farm during the year





WHARVES AT CARRABELLE.



1894, \$8674; leaving me a net profit of over \$4000.

"I am making as fine butter as was ever put on the market in the United States, and am now making more than fifty pounds per day. Expect to sell in butter and cheese, during this year, more than \$10,000. I am planting oats, corn, pumpkins, peas, sugarcane, potatoes and peanuts. I will say this is one of the best countries I ever saw for a poor man. If a man will come to this country, buy a farm, stay at home and attend to his business, it will not be long before he will have a bank account. I started in 1877 with nothing."

Publications devoted to the immigration interests of this section are filled with equally interesting testimonials of successful dairymen, truck farmers and fruit-raisers, all of whom report a wonderful fertility of soil, a reliability of yield, a never-failing market demand, and conditions of climate and living which give this favored section very much the aspect of an agricultural paradise.

While cotton is not, as formerly, the main crop of this section, yet its cultivation is not altogether abandoned, and as a sure money crop under every condition it probably will continue to hold a place of more or less importance here as elsewhere throughout the South. But with the diversification of farming, the profitable demand for other products which transportation facilities have made possible, and the introduction of new fields for enterprise, it is doubtful if there will ever again be the same general attention given here to extensive cotton-raising as heretofore. The raising of tobacco in this section has been given an impetus by the successful results following the large operations of Straiton & Storms, of New York, and it seems likely that this industry is destined to become one of so great importance as to attract national attention. After many experiments, Messrs. Straiton & Storms were convinced that no better leaf is possible anywhere in America than can be raised in Leon and Gads-

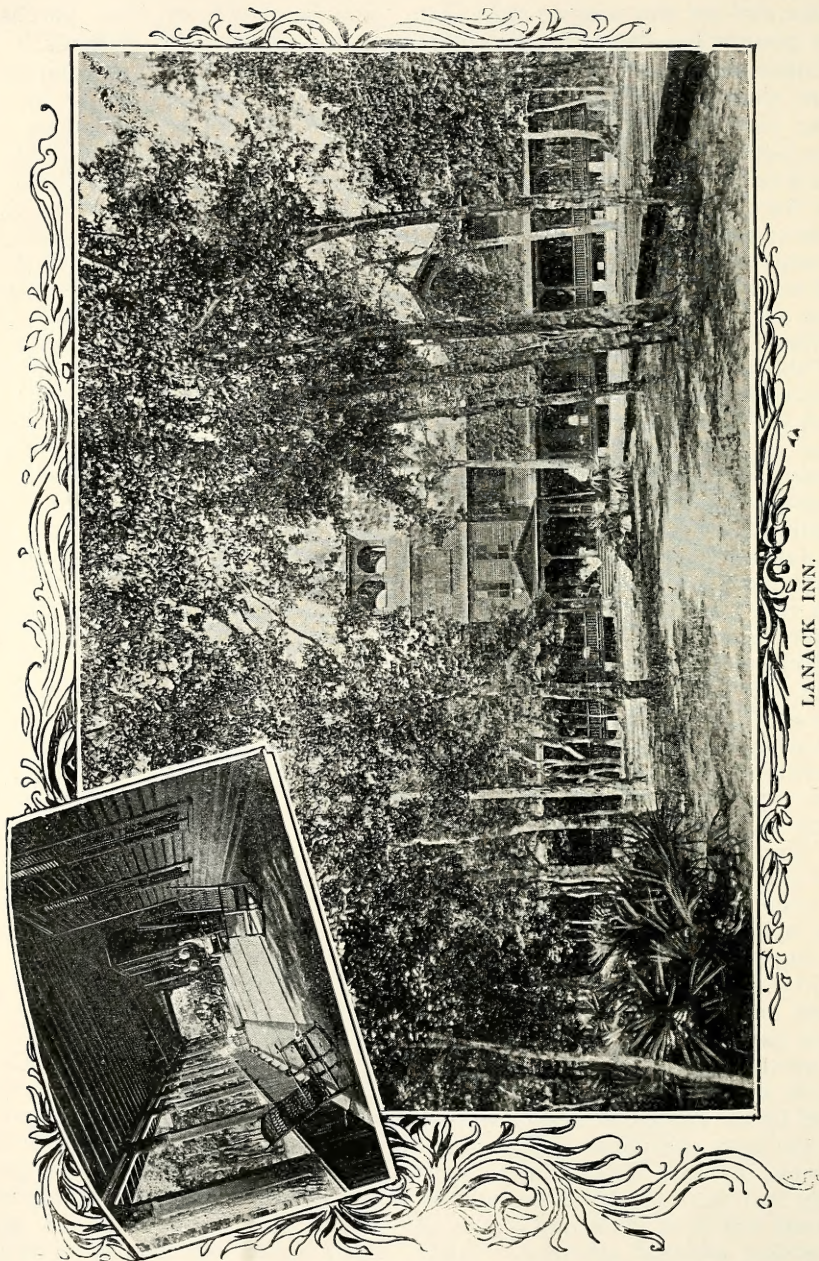
den counties, Florida, and the claim is even made that the quality will be found equal to the best Havana. The extent of their confidence in the situation is shown by their purchase of about 20,000 acres of lands in these two counties, and the equipment of their farms consists not only in the construction of large numbers of curing barns, employes' dwellings, etc., but they have brought in a herd of 500 head of fine cattle, four carloads of Kentucky mules and arranged every other detail necessary to supply the wants of their army of employes. They have built a large cigar factory at Quincy, in Gadsden county, the plant covering about six acres, employing about 1000 hands and turning out at present about 1,000,000 cigars a month. And the capacity is still inadequate, and will be increased.

These operations and the superior quality of the Sumatra leaf now raised in Leon and Gadsden counties have attracted the attention of manufacturers all over the country, and will be followed by other similar investments, in all probability, so that the tobacco industry bids fair to become an item of prime importance in the development and prosperity of the section. The El Provedo cigar factory has already been established at Tallahassee, and for the past two seasons representatives of half a dozen large factories have appeared on the field to bid for the Sumatra crop of Leon and Gadsden counties before the tobacco was taken down from the curing shed.

The growing of plug leaf has also shown highly satisfactory results, Mr. G. W. Saxon, president of the Leon County Leaf Tobacco Co., reporting that he has raised on twenty acres 20,000 pounds of as good tobacco as is raised in Virginia or North Carolina, and for which he gets an average of twenty-six cents a pound.

The soil throughout the section south of the "hill country" is usually a sandy loam, and contains a large percentage of lime and decayed organic matter. It is a combination of sand, phosphates, shell and vegetable mat-





LANACK INN.



ter, etc., and produces fruits and vegetables of a most delicate flavor. In the great variety, abundance and superior quality of its wild grapes, this region shows the adaptability of its soil and climate to grape-culture, and figs, pecan nuts, plums, pomegranates, blackberries, etc., are produced in profusion and to perfection.

The lands here are usually divided into two classes, hammock, or hardwood, and pine, and these into subdivisions of high and low hammock and first, second and third class pine. The high hammock are usually considered the best agricultural lands, but according to Mr. H. S. Elliott, of the Florida department of agriculture, and other authorities, they are little, if at all, superior to the best pine lands. The low hammock lands are swampy, but as they are usually near running streams, they can be inexpensively drained, and as the soil is composed of decayed vegetable matter they are doubtless of very fertile quality.

Of the pine lands, the first class is covered with several inches of heavy vegetable mold, beneath which, to a depth of several feet, is a brown or chocolate-colored loam, mixed with limestone and phosphate pebbles, and resting on a substratum of marl, clay or limestone. This soil is unlike that of any other State, and is remarkably fertile and wonderfully durable. According to Mr. Elliott, the second class pine lands probably form the largest proportion of landed area. They are likewise very productive; are also usually underlaid with marl, clay or limestone, and also produce crops for years without fertilization, but respond liberally to light fertilization. The third class lands are best adapted to the growth of fibre-producing plants.

On the hammock and first and second class pine lands are grown corn, oats, hay, cotton, rice, sugar-cane, tobacco, peanuts and all the vegetables grown in any country; also peaches, pears and other fruits equal to the best. The yield from these lands, for good farmers, is, per acre, forty bushels of corn, forty to fifty bushels of oats, 200

to 400 bushels of sweet potatoes, sixty to eighty bushels of rice, one to two tons of hay, twenty-five to forty tons of sugar-cane and 500 to 1000 pounds of tobacco.

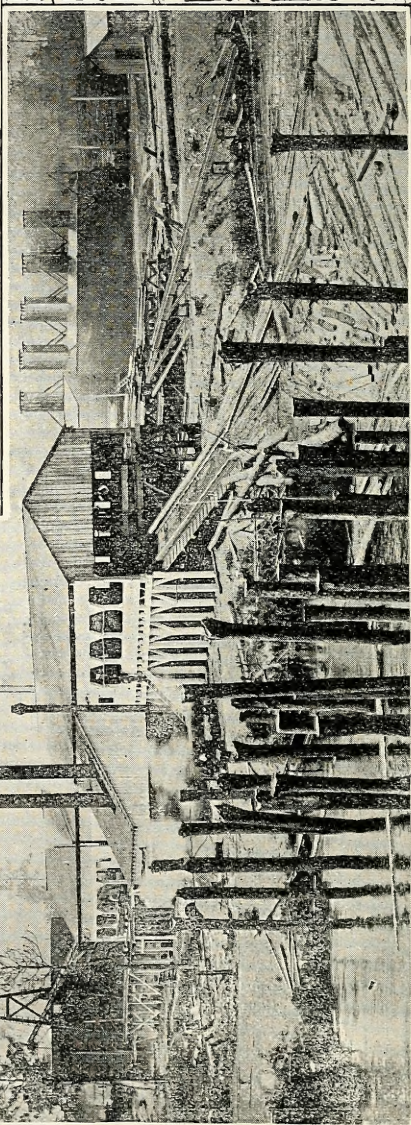
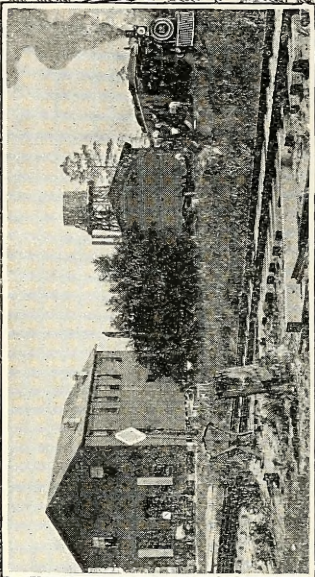
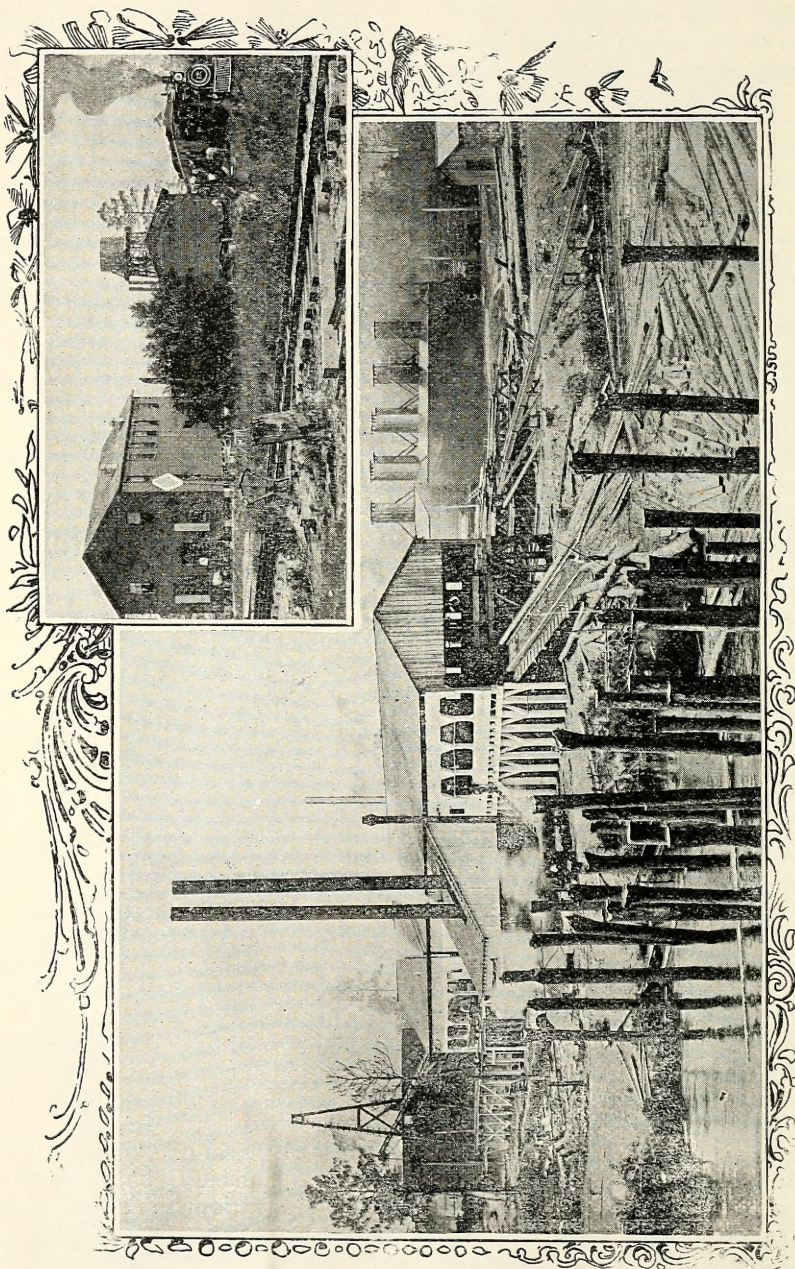
Mr. Elliott has made an exhaustive inquiry into the subject of sugar production, and has issued an elaborate report on the subject. The conclusions he arrives at are of momentous importance to this section. He affirms that Wakulla and adjoining counties, having similar conditions of soil, etc., can and do produce more cane to the acre, of better quality and for less money than any other section of the world. "Wakulla county," he says, "is peculiarly adapted to a successful culture of sugar-cane, because its elevation above sea-level is such that it is neither affected injuriously by drought, continuous rains in summer or cold winters. Its topography is gently rolling or undulating, which prevents the collection of large quantities of water on the surface by rainfall, and facilitates ample drainage; it is well watered by fast-flowing streams, many of which can be utilized with great profit for irrigation purposes.

"In addition to the usual well-known chemical constituents, so necessary to the perfect growth of all plant life, this soil contains one element in more soluble form and in greater quantity than is found in the soil of any other State devoted to like purposes, and which is absolutely essential to perfect growth and maturity and high quality of product; that element is silica.

"The cost of growing sugar-cane in this section excels in cheapness that of any other section of country in the world.

"It is authoritatively stated that on good new lands in Cuba, and with successful cultivation, an average yield of twenty-seven and one-half tons per acre can be had for five years. On the same authority it is said, that in Louisiana a good yield of plant is twenty-two tons. In South Florida the average is set down at twenty-four tons per acre. Here a yield of twenty-





ONE OF THE CLARK SYNDICATE'S SAW MILLS.



two tons per acre is considered small for ordinary land. As a matter of fact, first year's cleared lands yielded from thirty-five to forty tons per acre without fertilizer."

In considering the question of fertilization and in noting the fact that crops are raised for so many successive years in this section without fertilizers, it is well enough to know that nature has provided an ever-present annual restorative to the soil in the shape of a rankly-growing weed called *desmodium*, which springs up spontaneously in June of every year, wherever the surface of the ground has been stirred, and by the end of the year it leaves a crop of stems, leaves and roots weighing an average of ten tons to the acre. According to Mr. Collier, of the Agricultural Department, there are eight pounds of potash, sixteen pounds of phosphoric acid and forty pounds of ammonia to each ton of this weed. By turning this crop under in the fall, fertilizers which, in commercial form, would be worth about \$70 to the acre, are thus secured by simply utilizing the forces of nature.

Of the towns of this part of Florida, the largest is Pensacola, a charming and prosperous city of 15,000 people, beautifully situated on Pensacola bay. The next in size is Tallahassee, the capital of the State. Quincy is a thriving town in Gadsden county. Apalachicola, on the coast, is a quaint old place, famous for having been thirty-five years ago the third largest cotton-shipping port in the South. Its cotton trade was lost when the wide territory that had only the Chattahoochee river as a transportation highway was traversed by railroads and cotton was diverted to Savannah and other ports reached by rail.

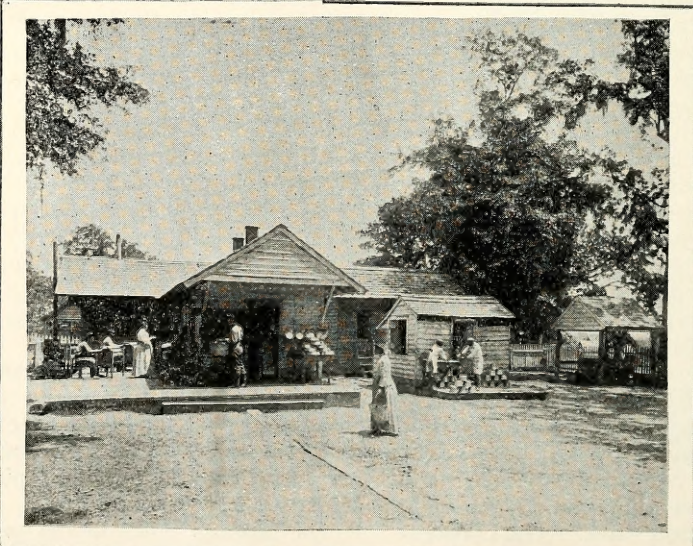
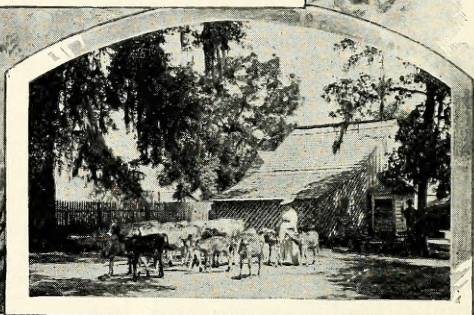
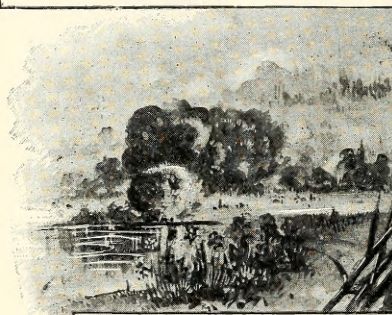
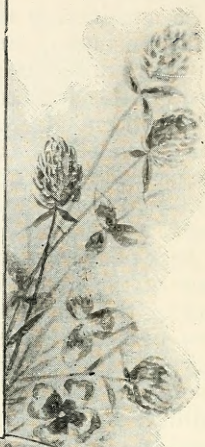
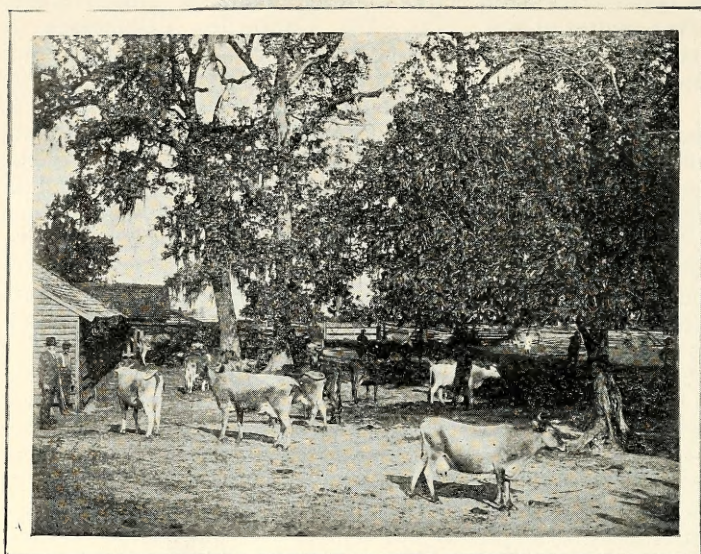
Within the district between Tallahassee and the coast are the extensive holdings of the Clark syndicate, whose operations have attracted wide attention for their conspicuously broad and comprehensive plans for development and colonization work. The corporations comprised in the syndicate are the Georgia & Florida Investment Co.,

the Scottish Land & Improvement Co., the Carabelle, Tallahassee & Georgia Railroad Co. and the Gulf Terminal & Navigation Co. Wm. Clark, president of Clark's O. N. T. thread works, of Paisley, Scotland, and Newark, N. J., is president of the company, and the other officers and directors are Northern and Scottish men of means and large business affairs. The headquarters of the syndicate are at 29 Broadway, New York, where Col. W. P. Simmons, the general counsel and manager, has his office. The lands of the syndicate comprise 50,000 acres in Leon county and over 700,000 acres in Wakulla; in fact, including about one-third of this entire county; also some 20,000 acres in Franklin county. This is a development enterprise, pure and simple, without any of the hit or miss elements of chance so frequently met with in land company operations. Over \$1,000,000 has been expended on these lands, the improvements consisting of a first-class and well-equipped railroad between Tallahassee and Carrabelle; a steamboat line running from Carrabelle, which port they largely control; a fine resort hotel on the Gulf, several townsites, a number of saw mills, etc.

The railroad now in operation between Carrabelle and Tallahassee will doubtless be extended to Thomasville, Ga., which will not only give market facilities to the fine farming lands of northern Leon county, but will give Thomasville a short line to the Gulf coast, which will be extensively used for both freight and passenger business. There are seven stations along the line of the present road, some of which will become towns of some importance. The Georgia & Florida Investment Co. owns 300 square miles of land along the line of the railroad, containing over 500,000,000 feet of fine long-leaf yellow pine. It has large and very complete milling plants at McIntyre and Hilliardville.

The farming lands of the syndicate companies are adapted to a wide variety of product. They extend from within





DAIRYING IS MUCH MORE PROFITABLE IN MIDDLE FLORIDA THAN IN ANY NORTHERN STATE.



eight miles of Tallahassee well on towards the Gulf, and embrace lands on which will grow hay, corn, oats, sweet potatoes, Irish potatoes, tomatoes and all kinds of vegetables, rice, tobacco, cotton, sugar-cane, figs, grapes, pears, peaches, peanuts, pecans, melons and every other kind of fruit except the tropical varieties. The plans of the company are to encourage small farmers, tracts being cut up into from five to forty acres each. These are offered at from \$5 to \$20 an acre, payable in cash or any way, almost—5 per cent. down, if desired, and the balance in instalments. The liberal arrangements offered by the syndicate companies are attracting a growing number of settlers, and must result in a very large immigration movement to that section.

The Scottish Land & Improvement Co. is interested in townsite development work. Its most important undertaking is at Lanark, five miles east of Carrabelle, and some forty-five miles south of Tallahassee, where it owns 1600 acres of land fronting on the Gulf. In the centre of this tract, through which the railroad runs, is the townsite of Lanark, which contains about 700 building lots. Here a very handsome hotel has been constructed, the Lanark Inn, and it is surrounded with conditions which make it an ideally charming place both as a winter and as a summer resort. Near the hotel is a fine spring, the water of which is pronounced by chemists to be not only remarkably pure, but to possess very pronounced medicinal qualities. Prof. E. T. Cox, formerly State chemist and geologist of Indiana, makes the following report on it:

"The Lanark spring water contains only 8.96 grains of mineral matter to the gallon. In this respect it resembles the Poland water, so extensively sold on account of the small percentage of contained mineral matter. But it is a much superior water to the Poland, because it contains a large amount of free carbonic acid, which gives it life and exhilarant properties. Of the 8.96 grains of solid matter, a

large portion is carbonate of iron; the remainder is carbonate of lime, carbonate of magnesia, chloride of sodium (common salt), sulphate of soda (Glauber salts), sulphate of magnesia (epsom salts), traces of lithia and bromide. Its effects on the system are: Alterative, tonic, aperient and diuretic. It is to be recommended for all forms of dyspepsia, general debility, loss of appetite and persistent constipation."

The water from this spring is conveyed to the hotel through pipes, and is the only water used. The Inn is provided with all modern conveniences and accessories to comfort.

The local management of the railroad and all the other interests of the Clark syndicate companies is in the hands of Mr. S. D. Chittenden at Tallahassee, who might, not inappropriately, be termed a Southern Yankee, for with his Yankee energy, industry and thrift he combines the instinct of hospitality, the companionableness, the warmth, the good fellowship, the cordiality, that are supposed to be characteristic of the Southerner.

This western part of Florida is a splendid game country. In the northern counties there are innumerable lakes that abound in fish. Along the coast of this part of the State are some of the finest fishing grounds in America. Oysters of the finest quality, shrimp and crabs are abundant. From October to April the ponds, bayous and beaches swarm with wild ducks, geese, snipe and other choice water fowl, and not far away a great variety of larger game can be found in abundance. All along this part of the Florida coast, but particularly from Carrabelle well nigh to Pensacola, the hunting grounds are exceptionally fine. There are localities in this section where practically aboriginal conditions prevail, and bear, deer, catamount, turkeys and other wild game are scarcely less numerous than they were 100 years ago. This is particularly true of Wakulla, Franklin and other of the coast counties. A few miles from Apalachicola is St. Vincent's Island, a beautifully wooded island of 1100



acres, which probably is not surpassed anywhere in the United States in variety and abundance of game, including salt and fresh water fish, water fowl of every sort, deer and turkeys.

Any article on this region would be incomplete without something more than a passing reference to the charming old city of Tallahassee. Tallahassee is not very big for its age, and it does not glory in its census figures or boast about its clearing-house returns. Its victories have been achieved along gentler lines than those of booms and commercial strife, but it has conquered, and goes on conquering, for all who know it are its enthusiastic lovers. The stranger does not need to be told that here is the abode of culture and refinement, for it is apparent in every lineament of her being. Instinctively one longs to abide here forever, amid these shady nooks and perfumed bowers, and be at rest. Possibly these same people, whom you soon come to find as graciously hospitable as you knew all along they must be, possibly they would have made a paradise wherever they might have gathered themselves together, and maybe Flor-

ida is entitled to some of the credit for the creation of this scene of enchantment, but the fact remains that somehow a combination of such people and such a place is nowhere else to be found.

Every home is a flower-garden, every street a sylvan glen; all the year the air is heavily laden with perfume, and the music of many birds fills the day and sometimes the night.

The drives about the city and beyond are pleasing features, for there is no mud in winter here, and then there are several resorts nearby, lake, river and spring, one particularly interesting spot being the mammoth Wakulla spring, 190 feet deep, and so clear that a five-cent piece can easily be seen on the bottom. A favorite pastime with visitors is to row out to the middle of the spring in a boat, and, then coming to a stop, to look into the water and get the creepy sensation which would come to one if suspended in midair 200 feet above the earth.

With its wealth of beauty and the charming hospitality of its people, Tallahassee is a perpetual invitation and temptation to every dweller in a less favored clime.





## AN OUT-DOOR SANITARIUM.

*By Frank H. Sweet.*

There are thousands of men and women in the North whose systems are not toned up to the vigor necessary to withstand the long-continued cold of the winter months. They may not be invalids, or even "delicate," in the full significance of the term, but wrap and take care of themselves as they will, they never come out of the encounter in the spring in as good condition as they entered it in the fall. They "catch" colds which are obstinate in their pertinacity; they are run down and listless, and they never get one-half of that buoyant, substantial satisfaction out of life which is the just heritage of every man and woman born into the world.

For such people as these, as well as for the recognized invalids and weaklings, there should be a perpetual season of sunshine and warm winds; an easily accessible sanitarium, not presided over by drugs and doctors, but by clear skies and hospitable woods and fields where nature administers tonics with such delicacy that one never becomes aware of taking them until brought to the fact by returning health.

There are many such sanitariums within reach, but questions of distance and expense enter largely into their practical usefulness. A large proportion of the invalids and "people who are not robust" belong to the North Atlantic and Great Lakes States—by which I mean those affected by climatic influences—and to them Italy and France, and even Mexico and California, are a long way off. Invalids shrink from breaking home ties, and they have a natural but unreasoning terror of leaving friends and familiar associations.

Florida is but a few hours away,

and its climate can vie with any in the country. It is not perfect—few are—but cold winds and frosty nights are of rare occurrence, and the visitor may count on being able to spend as much time out-of-doors as he would at home during an unusually pleasant September. I have spent December and January and February back among the pines, sleeping at night in a hammock slung between two trees, and never felt even the suspicion of a cold. With the stars shining down at me through the branches, and the whispering of the pine tops and the balsamic odors as a lullaby, I have enjoyed such sleep as I have rarely experienced elsewhere. The nights are cool enough to insure good rest, and one should always wrap himself in a blanket before seeking his hammock; and, to complete the picture, it might be well to make a substantial camp-fire of the rich, resinous pine knots which abound in the forest. It will burn long into the night, and its light will flare out into the forest aisles and make a picture the camper will watch until he falls away into a sound, dreamless slumber.

Florida is essentially a country for life in the open air; in winter the days are pleasant and equable, and the nights are an almost unfailing antidote for insomnia. No matter whether the invalid be at a hotel or a boarding-house, or in a cabin or camp in the depths of the great pine forest, so long as he is in the open air during the day and does not shut himself away from it at night, he is bound to be benefited. I have met hundreds of invalids who undoubtedly owed their lives to this open-air sanitarium, and rarely have I heard one speak of it except in glowing terms. I once said



good-bye to a friend, and supposed it was to be the last time. The brother who was taking care of him was obliged to go far back into the pine forest to help survey a new townsite, and he took the invalid along. They were six months in the woods, forty miles or more from the nearest house, and when they returned I hardly knew my friend. He had left, a tall, emaciated, hopeless invalid, scarce able to put one foot in front of the other; he returned a strong, well-built man. He had gained more than forty pounds.

In Orange county I became acquainted with a man whose friends had been afraid they would not be able to get him to Florida alive. At Jacksonville they had been obliged to carry him from the car. He purchased a tract of rolling pine land near Lake Eustis, and had a large, comfortable house built for his family. Near this he had a small building, with the four sides open to the air, erected for himself. It was scarce more than a roof to shelter him from the rain. In a few weeks he was able to walk, and in a few more began to look about for some employment that would keep him in the open air. To-day he is one of the largest truckers in South Florida. He raises hundreds of acres of tomatoes, beans, cabbages and other truck, and has from twenty to fifty men in his employ. He is not well, and never can be—he waited too long for that. But he is able to go into his fields every day, walking from one to another, directing his men, making experiments and planning new crops and improvements with as much eagerness and interest as though he were sure of the natural term of his life. He is an enterprising, ambitious man, with a keen interest in life and his surroundings. Every pleasant day he walks to the railroad station, a mile away, to look after his shipping and other business; and every few days he walks back among his pines and plans for new clearings, and new crops, and new experiments. In the North he

would have been dead long ago; here his every minute is full of the ambitions of life, and he may live on and on, an invalid, but strong enough, through the elixir of the pines and the open air, to trample his invalidism under foot.

Florida is not perfect. If one come here in the summer and exposes himself too much to the deleterious influences of the swamp lands and river bottoms, it will do him harm; but in winter there is little danger, even to the careless. And after one has become inured to the climate, or even spent a winter here, there is very little to be feared from climatic influences. I have spent winter and summer here, and have lived in camp and cabin and boarding-house and hotel; I have slept on the ground and on a bed of pine boughs and in a hammock, and I have been caught in storms at a distance from camp and been obliged to let my clothing dry upon my person. And yet I never caught cold or felt any inconvenience from my exposure and wettings. The dry sand is like a great sponge; almost before the clouds have disappeared the moisture has vanished and the ground become dry and warm. In the North I was accustomed to precautions; here I almost forgot the meaning of the word.

The rich, resinous odor of the pine forest is undoubtedly beneficial to certain ailments, and this, in connection with a warm, genial climate, is often sufficient to work wonders. Thousands of men and women go to Florida and spend the winter in camps and cabins, and rarely does one of them return without having been benefited. Hotels and boarding-houses are good, but the free, open-air life of the great forests is infinitely better. There is more freedom of movement, and keener interest, and the air is purer and more wholesome. If there are women in the party, a tent and a few more conveniences will be necessary; if only men, a plainly-constructed camp will be sufficient. And there is no constraint about location.



A camp may be made in the lake region, and then changed at will to the Indian river, or the Gulf coast, or down among the delightfully tropical islands and inlets of the southwest coast. A favorite method with many is to hire a large covered wagon, similar to the almost obsolete "prairie schooner," and with this to wander at will over the State. It is inexpensive, and a returned "wagoner" knows more of the country than a "boarder" will learn in a lifetime. But wherever and however the invalid goes, the one great consideration is to be out-of-doors as much as possible. Get interested in the surroundings, and in this interest forget your ailments; then when some accident or chance allusion brings them to your mind and you look for them—lo! and behold! they are not there.

I have friends and acquaintances who have been to the Sandwich Islands, and to Europe, and California, and Colorado, and New Mexico, and other places, and scarcely two of them have the same ideas in regard to climate. But taking them altogether, I have seen as much good come from a sojourn in Florida as from any sanitarium in the world. The Sandwich Islands are too far away for practical consideration, and, outside of these, I believe that Florida is fully equal to any of the other places named.

But one must bear in mind that there are cool nights, and that raw winds are not unknown on the east coast, and that even in the winter it occasionally rains. Light flannels should be worn throughout the season, and extra clothing should be kept in readiness to put on when necessary. Sometimes even a heavy overcoat is not a superfluity.

And, furthermore, I would advise those who go to Florida in search of health to start early and stay late. Do not wait until you have caught a severe cold in the fall, and return in time to catch another in the spring. Go before the weather has dropped down to freezing point, and do not return before June. And, above all, do not

wait until it is too late. Florida can do much, but it cannot cure what is incurable.

When you reach Florida, go to the extreme southern part of the State; and then if you do not wish to remain in one place, work your way north as the season advances. December and January are the coldest months, and these should be passed at Punta Rassa, Manatee, Palma Sola or Tampa on the west coast, or along the Indian river on the east. In February move your camp or wagon by easy stages toward the north, through Polk and Orange and Marion counties; or, if you prefer the towns, go to Orlando, Eustis, or even Ocala; and in March, on to St. Augustine and Jacksonville. April and May can be delightfully spent in Tallahassee, Marianna, Pensacola or along the palm-grown banks of the Suwannee, Ocklocknee, Wakulla and Sopchoppy. The "Tallahassee region" is very beautiful at this season, and fully explains why Florida is entitled to be called "the land of flowers." They are everywhere, and the air is rich with their fragrance, and with the fragrance of early ripening fruit. The people are hospitable and social, and they still retain much of the formal courtesy of ante bellum days. My most delightful memory of Florida is of the Tallahassee region and its hospitable people. South Florida lacks the peculiar charm of this out-of-the-way section, for it has been chiefly settled by Northerners, and its customs and manners are merely the transplanted habits and fashions of New York and Connecticut and Massachusetts.

There is an unfounded impression that Florida is expensive, and that its people think more of the stranger's money than of his welfare. This is untrue; I have been sick among them, and have fared better than I would in the average of the Northern States. And the expense depends almost altogether upon the individual. If he goes to a four-dollar hotel it will cost him four dollars a day and all the



extras he cares to shoulder. A two-dollar hotel will cost about half as much, and if he camps or "cabins," it will only cost him just what it does cost him. I have lived well in the woods for months at a time—had plenty of good, substantial food and fruit, and enjoyed myself better than

I have done at some of the high-priced hotels—and it cost our party less than seventy-five cents each per week. As a rule, provisions are very cheap, and for a dollar to a dollar and one-half a week a camping party of four or more could live as comfortably as at an average hotel.

## SUGAR BEET CULTURE.

A statement published in the August number of the "Southern States" as from the projector of a proposed colony of Germans to be settled in South Carolina, that the colony would engage in sugar-beet culture, and that for the utilization of the product a beet-sugar factory would be erected, has given rise to a new interest in this industry and evoked inquiry as to its possibilities in the South.

The manufacture of sugar from beets has been carried on in Europe on a large scale for more than half a century, and the business has grown steadily and rapidly in importance and magnitude. The amount of beet sugar produced in Europe is greater than the cane-sugar production of the world, the figures being respectively, in round numbers, about 8,000,000,000 pounds and 6,500,000,000 pounds. The cane-sugar production of Louisiana for the last five years has averaged about 520,000,000 pounds, less than 7 per cent. of the beet-sugar production of Europe. (The sugar production of Louisiana last year was 710,827,438 pounds.)

Of this 8,000,000,000 pounds, Germany produces a little more than one-third, Austria-Hungary produce about two-thirds as much as Germany, France and Russia each approximately one-half as much, and Belgium and Holland smaller quantities.

A part of this product comes to the United States. The importations of beet sugar for the year ending June 30, 1896, aggregated nearly 600,000,000

pounds, of which about 450,000,000 pounds came from Germany.

There are seven beet-sugar factories in the United States—that is, seven operating commercially—three in California, two in Nebraska, one in Utah and one in Virginia. A factory is now being built in New Mexico.

The growth in the manufacture of beet sugar in this country for the last few years has been as follows, in round numbers: 1887, 600,000 pounds; 1888, 4,000,000 pounds; 1889, 6,000,000 pounds; 1890, 8,000,000 pounds; 1891, 12,000,000 pounds; 1892, 27,000,000 pounds; 1893, 45,000,000 pounds; 1894, 48,000,000 pounds; 1895, 67,000,000 pounds.

The Department of Agriculture and some of the agricultural experiment stations have assiduously aided and fostered the industry during the past fifteen years or more by extensive and continuous experiments in a number of States and by the distribution of seed and of literature bearing on the subject. The Secretary of Agriculture, in his report for 1890, said:

"Encouraging progress has been made within the past year in the development of an indigenous sugar industry. Under the impetus given by the investigations of this department improved processes of manufacture have been introduced on many of the more prominent plantations of Louisiana. In Florida large tracts of swamp land suitable for the cultivation of sugarcane have been reclaimed, and the culture and manufacture of cane have al-



ready been begun. In Nebraska a large beet-sugar factory, capable of using 300 tons of beets per day, has been erected, with the best approved modern machinery, and is now in successful operation. The finest quality of granulated sugar is produced, which finds a ready local market, thus avoiding all expenses of transportation to and from a distant refinery. It is not an idle prophecy to speak of the production of a quantity of beet sugar in the near future sufficient to supply one-half or more of all the sugar consumed in the United States."

And elsewhere in the same report he says: "There is every reason to believe that the encouragement extended to the sugar-beet industry by the investigations of the department and by act of Congress will result ere long in the establishment of many additional sugar factories in those portions of the country which the data obtained by the department show to be best suited for the purpose. When it is considered that 250 beet-sugar factories of the size and capacity of those now in operation in California and Nebraska will be sufficient to make one-half of the total sugar consumed in the United States, it is not idle to expect that in the course of a few years a large proportion of the sugar consumed in the United States will be made therein from the sugar beet."

It must be said that the experts of the Agricultural Department do not consider the conditions in the South favorable to the profitable culture of the sugar beet. Against this it may be urged that the investigations of the department have been directed mainly to the Pacific coast and the Northwest, and that therefore the capabilities of the South have not been sufficiently explored to justify either an adverse or a favorable judgment.

It is true that the prevalent impression among those who are familiar with the industry is that low latitudes cannot compete with more temperate regions in beet-sugar production, but under continued experimentation the area within which the beet may be

profitably grown and made into sugar is continually widening.

Dr. H. W. Wiley, chemist of the Department of Agriculture and director of the department beet-sugar experiment station, is the author of a number of pamphlets on the culture of the sugar beet, in one of which, issued in 1891, he says:

"Experience has shown that the sugar beet reaches its highest development in north temperate latitudes. So far as the production of the beet with high tonnage is concerned, it is found that it will grow far to the South, but beets grown in such localities, upon the whole, are less rich in sugar and less suitable for the manufacture of sugar than those grown further north. It must be remembered, however, that the expressions north and south do not refer to any absolute parallel of latitude, but rather to isothermal lines, which in many cases run obliquely to the parallel of latitude and in some cases cross them almost at right angles. As a result of many years of careful experimentation, it may be said that as far as temperature alone is concerned, the sugar beet attains its greatest perfection in a zone of varying width through the centre of which passes the isothermal line of seventy degrees Fah. for the months of June, July and August.

"This isothermal line, for the United States, begins at the city of New York and passes up the Hudson river to Albany; thence turning westward it runs near Syracuse and passes in a south-westerly direction, touching the shore of Lake Erie near Sandusky, Ohio; turning then in a northwesterly direction it passes into Michigan and reaches its highest point in that State near Lansing; then passing in a south-westerly direction it enters the State of Indiana near South Bend, passes through Michigan City, then in a northwesterly course continues through the cities of Chicago and Madison, reaching its highest point near St. Paul, Minn.; thence it passes in a south-westerly direction until it enters the State of South Dakota; thence it turns



again northwest and reaches its highest point in Dakota just above the forty-fifth parallel of latitude, where it crosses the Missouri river. The isothermal line then turns almost due south, following very closely the one hundred and first degree of longitude until it leaves the State of Nebraska near the northeast corner of Colorado; passing in a southwesterly direction through Colorado, it reaches at Pueblo almost to the one hundred and fifth degree of west longitude, whence it passes in a slightly southeasterly direction into New Mexico, turns to the west and crosses the one hundred and fifth degree of longitude at about the thirty-second degree of latitude; then turning westward it passes in a very irregular line through the States of California, Oregon and Washington.

"Extending a distance of 100 miles on each side of this isothermal line is a belt, which, for the present, may be regarded as the beet-sugar area of the United States. There are doubtless many localities lying outside of this belt, both north and south, in which the sugar beet will be found to thrive; but this will be due to some exceptional qualities of the climate or soil, and not to any favorable influence of a higher or lower temperature."

And in his report for 1893 he says: "In general, however, the data bear out those of previous years in showing the areas in this country where the best beets can be grown. It is in these regions where the development of the industry must be expected.

"There is probably not a State or Territory in the Union which is not capable of growing sugar beets of fair quality. Even in the far South beets of fair sugar content have been produced, and with good tonnage, but when the competition of the world is to be met, with the price of sugar as low as it is now, only those parts of the country where the soil and climate are especially favorable can be expected to compete successfully with the beet-sugar industry already firmly established in older countries."

On the other hand, here are some quotations from European authorities, taken from a paper on "Sugar Beet Culture in Germany and France," by Walter Maxwell, published by the Agricultural Department:

"Prof. A. Girard, of the Conservatory of Arts and Industries, Paris, whose studies of the sugar beet are well known, has made the following observations:

"The greatest number of our beet-sugar factories are established in that part of France extending from the centre to the north and passing through the eastern provinces, where the climate is a temperate one; where the yearly amount of rainfall during the growing season is favorable to an even development of the beet, and where the summer lasts just long enough to mature the roots before the frosts set in. That part of France has been considered the best, and the only part adapted to the cultivation of the sugar beet. Until lately it has been held that beets could not be grown with any measure of success in the south of France, on account of the hot, dry weather which prevails during the summer and the heavy rains in autumn, which cause a second or delayed growth. That opinion has now changed, and two factories are well established in the south, Beaufort, Department de Vaucluse, which produces 10,000 bags of sugar, and Laudun, Department du Gard, thus showing that with proper cultivation, fertilizers and irrigation, the culture of the beet in that part of France is also possible."

"Respecting the action of climate on beets and beet seeds grown in the north and in the south of France, respectively, M. Henri Vilmorin, Paris, says:

"The influence of climate on the characteristics of the seed of a given variety of beet is not perceptible if only exerted for one year. We had seed grown from the same batch of stock-seed in the north and south of France, and no difference whatever was observed in the features of the roots. The seed from the south, however, was gen-



erally of a brighter color, drier and of a slightly stronger growth.'"

Mr. Maxwell adds:

"Although it is held that given climates are especially adapted to culture of the sugar beet, in the words of Professor Girard 'the results of more recent experiments, and particularly where the conditions of growth have been largely within experimental control, indicate that it must not yet be said where the beet cannot be successfully grown.'"

And Professor Anton Veith, director of an agricultural college in Bohemia, who is referred to as an authority on the subject of beet-culture, and who spent two years in America studying our farming methods and capabilities, said a few years ago:

"The United States possess soils of every kind, and in every State where wine and corn are produced, it is surely possible to raise sugar beets."

If it be true that beets grown in the South have not as large a sugar content as those grown in localities exploited by the Agricultural Department, there would seem to be in the South compensating advantages. The greater economy with which all agricultural operations can be conducted, the extension of the farming season throughout almost the entire year making it possible for the beet-grower to give attention to other things as well and making him, therefore, less dependent upon his beet crop, reducing thereby also the cost of growing the beets, the lower cost of living—these, and other advantages, are to be taken into account. Moreover, a very serious disadvantage of the North, as compared with the South, is emphatically set forth in the report of the chemist of the Department of Agriculture embodied in the annual report of the Secretary for 1893. Discussing the advantages of the United States for manufacturing sugar, as compared with Europe, he says:

"In so far as the manufacturing is concerned, conditions are practically identical, although it must be admitted that in some parts of this country they

are more favorable and in others less so than in Europe. As an instance of more favorable conditions, the experience of California may be cited. On account of the mild winters in that locality it is not found necessary in any case to silo the beets, and unless exposed to the danger of second growth they can be allowed to remain in the ground until the time for manufacture arrives. There is thus a considerable diminution of the expense of manufacture, an expense which comes from the labor of harvesting and siloing the beets and protecting them from frost.

"On the other hand, the conditions in Nebraska are distinctly less favorable for manufacture than in Europe. In the climate of the former the access of winter is often sudden and early. It is not unusual for the thermometer to reach the zero point in November. It therefore becomes absolutely necessary that the harvest of the beets should be fully accomplished not later than perhaps the 20th or 25th of October. The whole excess of beets not manufactured at that time must, therefore, be preserved, and this preservation is an expensive operation in a climate where so severe a degree of frost must be expected. Then, again, the periods of cold may be separated by periods of great warmth. In this case another danger arises. The high temperature which the silos may attain at those times induces growth, or, if the buds making the growth possible are all removed, at least deterioration. Taking all parts of the country together, it may be said that the conditions of manufacture, including the abundance of fuel and its cheapness and the other factors active in determining the cost of production, are as favorable as in Europe."

Certainly in the matter of mild winters, with the consequent saving effected in carrying over beets from one season to another, the South is not less favored than California, and in the matter of cheap fuel and cheap labor it is as fortunate as California or any part of the North or West.

While, however, there would seem



to be, from a casual study of the facts, ample justification for the belief that the South can compete with any other part of the country in the successful and profitable growth of sugar beets and in the manufacture of sugar from them, it would not seem to be wise to engage in this industry until it has been shown by experiment what parts of the South, if any, are suited to it.

In regard to the soil best suited to beet-culture, Dr. Wiley says:

"The sugar beet does not require a particular kind of soil for its proper production. In general, soils are described for practical purposes as clayey, sandy, loamy or alluvial soils; all of these soils will produce beets. The black prairie soils also have been found, with proper cultivation, to produce excellent beets. Generally the least favorable soils for the sugar beet are a stiff clay, which is cultivated with difficulty and readily packs under the influence of hard rains and hot suns, and virgin soils, or those specially rich in organic matter or alkaline salts. Perhaps the best soil may be described as a sandy loam; a soil containing a happy equilibrium between organic matters, clay and silica.

"In general, it may be said that any soil which will produce a good crop of Indian corn, wheat or potatoes will, under proper cultivation, produce a good crop of sugar beets. The soil on which sugar beets are grown, however, should be reasonably level, and this being the case, it should be well drained. Natural drainage on level soil being somewhat deficient, it is most imperative that tile drainage be practiced. It would be useless to attempt to raise sugar beets on level land without tile drainage, especially in a rainy season."

Sugar beets require intensive culture. All reports on the subject emphasize the importance of the most careful preparation of the soil, high fertilization and continuous working and watchful care during the period of growth.

It is noteworthy that the sugar-beet industry exerts a favorable influence

upon all agriculture. In a report made by Consul-General Brewer, of Berlin, he quotes from a treatise on the sugar industry as follows:

"It is an established fact that notwithstanding the extensive cultivation of sugar beets, no decrease in the yield of cereals has taken place, but has, on the contrary, augmented by double and treble the amount in the districts where sugar beets are planted, and that at those very places the production of meat is steadily increasing. The growth of sugar beets requires that the soil be tilled to a greater depth, thus adding to the thrift also of other plants to be cultivated later on the same soil. Besides, the remnants or waste left in the manufacture of beet sugar furnishes not only an excellent food for cattle, but also a fertilizing stuff, dispensing to a considerable extent with the use of artificial manure. But the profit is also considerable which this industry affords people who work in the sugar manufactories, as they get employment throughout the whole year, during the spring and summer seasons in the growing and cultivation of the beets, and during the fall and winter in the manufactories."

In Europe many of the factories for the manufacture of sugar are owned by the growers themselves. In a report on sugar-beet culture in Germany, by the United States Consul at Brussels, published some years ago by the Department of State, this method of joint ownership was explained as follows:

"A very considerable number of the refineries in that country are now organized and incorporated as co-operative companies. In other words, the large and small cultivators of the beet in certain districts have built refineries upon the following joint-stock plan, viz: After determining the probable cost of their contemplated refineries, shares of stock are issued, payable in instalments, to cover the expense incurred, and each stockholder obligates himself to furnish to the refinery an annual quantity of beets, proportioned to the stock he has in the concern, and as



every stockholder, whether large or small, is dependent upon the product of the refinery for quite a portion of the profits of his cultivation, it may be readily imagined that he leaves nothing undone in the way of cultivation to bring his beet crop up to the highest possible standard of both quantity and quality. Indeed, there can be but little doubt that this class of sugar-manufacturing associations has done more to perfect the beet-culture in Germany than any other element whatever."

While it is not to be imagined that there are fortunes to be made rapidly in the growing of sugar beets, the testimony available seems to prove that under normal conditions it is a very profitable crop. Before the farmers

of any locality, however, can go into the business of growing beets, there must be factories for their utilization, and before capitalists can be induced to erect factories, it must be demonstrated that the locality can produce beets of such quality as can be profitably used in manufacturing. There would seem to be sufficient likelihood of this being found to be the case to justify carefully-conducted and extended experiments in nearly all of the South. If the agricultural experiment stations in the different States should initiate investigation and experiment in co-operation with farmers it might lead to the establishment of this industry in the South on a large scale.





# THE SOUTHERN STATES.

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The SOUTHERN STATES is an exponent of the Immigration and Real Estate Interests and general advancement of the South, and a journal of accurate and comprehensive information about Southern resources and progress.

Its purpose is to set forth accurately and conservatively from month to month the reasons why the South is, for the farmer, the settler, the home seeker, the investor, incomparably the most attractive section of this country.

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### Condition of the Farmers of the South.

We had occasion last month to say something about a stupidly mendacious article recently published in a Chicago paper from the pen of a Georgia newspaper writer. It becomes necessary to speak of another production of the same writer, who seems to be making a business of selling to Northern journals articles made up of calumnies of his own State and the South generally.

In another part of this issue of the "Southern States" we print an article entitled "King Cotton's Slaves," taken from the New York Independent, and following it will be found an article bearing the title "King Cotton's Slaves' Emancipated," which was published in a subsequent number of the Independent.

As stated in this second article, while it

is true that for many years after the war the majority of farmers in the cotton States grew cotton predominantly and imported their foodstuffs, that they were mortgaged a year ahead always to the merchant or factor for supplies, and that they paid ruinous prices for everything they bought, it is not true that this condition prevails generally or widely now; it is not true that it ever did prevail universally, and it is not true that where it does exist, or did at any time exist, it is a necessity imposed by conditions of soil or climate. It was simply the result of a thriftless policy into which nearly all the farmers had been forced after the war by lack of capital for farming and lack of money to live on while making crops, and the ready salability and high price of cotton which made merchants willing to advance money on the crop before it was planted. There has never been any reason why any thrifty farmer could not make a living and make money in the cotton belt. As a matter of fact, there have always been, even during the worst period of this "cotton slavery," a few farmers in nearly every community in the cotton territory more progressive, intelligent, thrifty and industrious than their neighbors, who kept out of debt, lived comfortably, had well-kept farms and good stock and accumulated money.

Some very interesting testimony on this point is furnished in a letter from Mr. P. B. Tobin, of Augusta, Ga., which was published in the "Southern States" for August, 1894. Mr. Tobin is a cotton factor in Augusta, a member of the Augusta Cotton & Compress Co. and a director in the Augusta Exchange. He says:

"I claim that farming does pay a profit



every year, and a handsome profit in favorable seasons, where food products for man and beast are raised, and the same time and careful attention are given to it that are necessary for the successful operation of any line of business. In support of this claim I shall not offer any theories, but deal solely with facts obtained by a close personal observation as a cotton factor for the past fifteen years, making advances to and dealing directly with over 3000 planters, white and black, educated and uneducated, in fourteen counties in Georgia and six counties in South Carolina. During this period I have seen many hundred farmers start without one cent of cash or any equipment; hire an animal and rent a farm from some land-owner, who would feed and clothe him, or endorse for him to obtain a small loan of cash elsewhere (usually \$50. to \$75), and the first year make enough to pay the rental and the loan and buy the animal he had hired; and at the end of the second year be able to buy another horse or mule, or make the first cash payment upon a piece of the land bargained for with his landlord. In many instances I recall where these same renters, or lessees, have bought half of the landlord's plantation within a period of five to seven years, and are now conducting successful farms without obtaining one dollar of aid in advance, while many others in the same space of time have taken sums, ranging from \$500 to \$2000, from the profits of their farms, and gone to merchandising in the nearest country town. There are instances also where parties have, for various reasons, removed from one county or district into another, and have made further progress in acquiring more mules, or land, or both; and alongside of him are those who do not succeed, just as is found in all branches of business, which emphasizes the point I shall make, that it is the man and his methods.

"I would refer also to another class of farmers who have prospered, namely, the landowner, many of whom within five to ten years have acquired possession of large landed estates by buying each year some of the acres of his less provident neighbors, who, in the language of a valued friend, 'go fishing too often.' There are others whose plantations had to be mortgaged on account of endorsements for friends or ac-

cidents, such as the burning of their dwellings and disease destroying live stock, who have been able to free them from debt with the surplus earnings made on the place. It should be borne in mind that these observations cover the period of the greatest depression in prices of farm products during the last thirty years, as well as two severe money panics. The writer is prepared and would be glad to furnish the names and addresses of such farmers as have been referred to to anyone who is interested. Where farms do not pay in this section I have observed that it is due to one or all of the following reasons:

"1. Not raising food products for man and beast, but depending upon proceeds of the cotton crop to buy largely of them.

"2. A lack of that constant and careful attention which is necessary to succeed in any business.

"3. The improper cultivation of too great an area, instead of half the acreage, at half the cost, kept up to a high state of cultivation.

"4. The failure to save and make fertilizers largely at home, necessitating the purchase of commercial fertilizers to be paid for with what would otherwise be largely profit.

"I have found also that many successful farmers make the mistake of spending their surplus or profit each year, and, of course, are compelled to borrow to make the next crop."

The all-cotton policy and the alleged enslavement of the farmers by the country merchant are not the product of any adverse conditions, but of an improvident system. And this system is rapidly giving way to wiser methods. A year ago (August, 1895) the "Southern States" published letters from a number of bankers in the cotton territory of the South, written in answer to an inquiry as to the condition of farmers. The following are extracts from these letters:

Frank Hammond, president the People's Bank, Greenville, S. C.: "Crop prospects never better, special attention being paid to a diversity of crops; cotton a little less in acreage, with an immense acreage in corn which promises large returns. Oat



and wheat crops are large and well saved. Apples, peaches, grapes, melons and other fruits were never so plentiful as this year. No corn will be purchased by farmers for another year, and none at all will be shipped into this country during the next twelve months. We have vegetables in abundance, and more attention is paid to saving them than formerly. More money is now deposited in banks by farmers than before in the history of the State."

J. G. Rhea, cashier City National Bank, Griffin, Ga.: "Farmers say they have the best corn crop ever known in this section of Georgia. The oat crop was almost a failure on account of the severe winter killing them out. Other small crops, such as potatoes, melons, fruits, etc., were never better. Our farmers bring meat to town to sell now, where they had to come to town to buy their meat a few years ago. It is a common thing to see farm wagons on our streets loaded with corn, fodder and hay to sell, and we look upon our farmers as the best off and most independent people in the world. The whole outlook, from our standpoint, is progressive and encouraging."

A. J. Rooks, cashier Fayette County Bank, Somerville, Tenn.: "Crops of every kind are in fine condition, and the prospects are very bright indeed. This county is shipping corn this year, and the crop now growing promises to be the largest ever grown in this county. The large Northern immigration during the past eighteen months has had fine effect and caused great diversification of crops. The movement of Northern people into this county continues in ever-increasing proportions, and the county is becoming practically a Northern colony. The immigrants are a good class of Northern farmers, who come here with sufficient money to buy farms and generally bring their stock with them. All are making good crops, and without exception are well pleased with their new homes. The fruit crop is immense, and is destined to be a leading source of revenue to this county."

W. E. Ellis, cashier Crowley State Bank, Crowley, La.: "More corn is being raised this season than ever before, and it proves a paying crop. More attention is also being paid to fine breeds of hogs, which are being scattered largely over this section,

and are found to be a paying investment. Fruit trees of nearly all kinds grow here luxuriantly, and we have a fine crop this season of peaches, pears and plums."

W. A. Law, president Spartanburg Savings Bank and Central National Bank, Spartanburg, S. C.: "Corn has been planted much more freely than usual, and present appearances indicate an excellent yield both on uplands and lowlands. Much attention has this year been given to the planting of peas. Every year witnesses an increase in fruit and truck production, and the numerous cotton mill towns in Spartanburg county furnish a ready cash market for such crops."

Meredith A. Sullivan, cashier the Waco State Bank, Waco, Texas: "The people of Texas have at last discovered the necessity of diversifying their crops; they are now planting corn, and propose to raise their own meat, instead of going to Chicago and Kansas City. They are planting fruits and vegetables, and propose to take advantage of the resources God Almighty has given them."

W. J. Cameron, cashier the First National Bank, Birmingham, Ala.: "The past year has been a very good one, too, for our farmers. As a rule, they have bought no corn this year, and all the merchants report much smaller demand for advances on crops than usual. It has been a remarkable season in many respects, but most striking perhaps in the vast crops of fruit, vegetables and melons raised and marketed. This comparatively new source of profit to our farmers has been assisted materially by good roads and a constantly-increasing home demand."

W. G. Brockway, cashier First National Bank, Gadsden, Ala.: "Farmers are borrowing less than usual this year, and are diversifying their crops as never before. This county has been favored with fine seasons, and the prospects for all crops are very fine and comparatively safe from any danger. Many farmers from the North and West are visiting this section, and some have settled here."

Geo. B. Edwards, president Exchange Banking & Trust Co., Charleston, S. C.: "Many farmers have gone into the cultivation of fruits and vegetables with wonderfully profitable results; this is particularly the case around Charleston, where the



annual product of fruits and vegetables amount to more than \$2,000,000 in actual cash."

Jos. A. McCord, cashier Atlanta Trust & Banking Co., Atlanta, Ga.: "The merchants are selling a smaller quantity of the real necessities of life than they have for several years. This is brought about by the farmer diversifying his crops and raising more breadstuffs and meat at home than they have since the war between the States. There is a decided increase in the corn production. Some sections of our State within a radius of 150 miles of Atlanta are giving considerable attention to the development of fruits of different kinds. The peach crop in this State has been finer than it has been for years; more of it has been marketed, as the facilities for marketing it have been better. The competition between the railroads causes it to get prompt attention and transportation, thereby opening up new markets for the entire trade. In reference to the farmers coming from the North and West, there have been some few colonies located in the southern part of the State. We have had an influx from the North and West in the middle part of this State for several years, and when one of them comes another follows."

R. T. Nesbitt, commissioner of agriculture, Atlanta, Ga.: "The day of diversified farming has reached this State at last, and we are no longer slaves to King Cotton. In the past five years there has been a great deal more attention given to the raising of corn and hogs, and the grasses and fruits, and in many towns, where three years ago the surrounding farmers bought all their bread and meat, now you can daily see home-made bacon and lard and corn offered for sale. Our people are erecting creameries and canning factories, and establishments for evaporating fruit, and are clearly traveling the road that leads to independence and wealth."

John W. Reynolds, president First National Bank, Rome, Ga.: "Diversified crops are the order of the day in this section. If this is kept up at the present rate in a few years the cotton crop will be our surplus."

S. Levy, Jr., president the Commercial National Bank, Shreveport, La.: "The farmers of North Louisiana have increased the acreage of corn to such an extent, and are raising hogs also, that, as a rule, they will

not only have a bountiful supply for home consumption, but hundreds of hogs will be shipped to Chicago. The fruit and vegetable industry in this immediate vicinity has grown to such proportions that the growers have formed a shipping association. This has proved very satisfactory, and in this industry the future promises all the most sanguine could anticipate. The immigration to Western Louisiana from the North and West continues in a steady stream, and is of a very desirable character. To a man they are self-sustaining."

J. A. Conway, assistant cashier Merchants' National Bank, Vicksburg, Miss.: "The low price of cotton for the past two years has taught our planters a valuable lesson, and a ride through some of our largest neighboring plantations just now would leave the visitor in doubt as to whether he was in a cotton or corn country. Fruit is here in great abundance, and in hucksters' carts and at fruit stands fine peaches, pears, grapes and watermelons of native growth find ready market at fair prices, while on the farms sweet potatoes, Irish potatoes, peas, rice, oats, millet, sugar-cane, sorghum and clover diversify the fields and bring a better revenue per acre than cotton used to yield."

Frank Roberts, cashier Calcasieu Bank, Lake Charles, La.: "The crops this year have been made by the farmers with less outside help in the way of advances by merchants or brokers than ever before. As a rule, our farmers are growing all the corn, fruits and vegetables they need for their own use, and in many cases they have a surplus for sale. A leading wholesale grocer told me a few days ago that he would not place an order this year for canned fruits, as his sale of fruit jars indicated that there would be as large a quantity of home fruits put up this year as had heretofore been consumed in a year. This section of the State is attracting the attention of Northern homeseekers, and Iowa, Illinois, Indiana, Kansas and Nebraska can each count their scores of sons and daughters who are now glad to call Southwest Louisiana home."

Arthur Tong, cashier Bank of Hammond, Hammond, La.: "The diversity of crops is greater than ever before, corn taking the place of cotton. Crop prospects are good. Fruits and vegetables are a spe-



cialty with us. There has been a steady incoming of people from the North and West, and we look for more during coming winter."

T. J. Cornwell, vice-president the Bessemer Savings Bank, Bessemer, Ala.: "The farmers in our section have for the last few years given their attention to a greater diversity of crops and with much success. They have little trouble in disposing of their products, almost right at their doors, on account of the number of people who work in our mines and other industries."

J. W. Burke, receiver Chattanooga Southern Railway, Chattanooga, Tenn.: "The enormous increase in the area of the cereals—corn, wheat, oats, rye, etc.—and the decrease in that of cotton, the unprecedented supply of all kinds of fruits and early vegetables, liken this country today to the most prosperous parts of the great West thirty years ago. The system of farming is undergoing a great and healthy change. The South is raising what she needs. The last five years' experience has inculcated practical lessons of economy in the South that have proved real blessings. Considerable inquiry is being made for lands in this region. The old practice of mortgaging the crop for advances is going out of existence. The immigrants are examining, seeking, coming. The railroads are plied with inquiries from the West. The fruit-raiser is the pioneer in this healthy invasion of our Southern highlands, but the farmer and the stock-raiser are soon going to find out the splendid natural advantages of the soil and climate, and the rush will be great."

A very conclusive answer to this whole Reed article is found in a recent paper by Col. J. B. Killebrew, of Nashville, Tenn., describing a part of Northern Alabama and a Northern colony in Tennessee. The section he describes may be taken as a type of the greater part of the cotton region of the South, and the colony he tells about is a specimen of many in other Southern States. He says:

"Nothing is more gratifying than to see among the farmers in a large part of this section a disposition manifested to diminish the acreage of cotton and increase the acreage in grain and the grasses and to

engage in stock-breeding. Many fruits and vegetables are also shipped, as well as melons. Timothy, herd's grass and orchard grass are now sown over a large area, and the richness and succulency of these meadow and pasture grasses are the most attractive features to persons visiting this region. Many of the old cotton plantations that were exhausted by cotton culture are being reclaimed by clover and manuring. The old gullied fields that twenty years ago disgraced the agriculture of the region are rapidly disappearing. The red rims that formerly encircled the smaller basins are being set in grass, and the landscapes that once typified poverty and prostitution of the soil are being clothed with a rich verdure upon which fat flocks browse and herds of improved cattle graze in all the wantonness of luxuriant abundance. Within twenty years the whole aspect of the region has changed. Then it was a succession of cotton and cornfields; now these crops are alternated with crops of grass, clover and wheat. Then the wheat-fields were rare, the yield scant and the market uncertain. Then it required a bold man to invest his money in blooded cattle, sheep or horses. Then cotton was king, and, like many other kings, it impoverished its subjects, demanded all their time, held out hopes of a rich fruition, which ended in disappointments, worry, vexation and the sickness of deferred hopes. Now everybody is either breeding or hoping to breed improved animals. There are within six miles of Huntsville ten or twelve establishments for the breeding of trotting horses. Some of these establishments keep fifty mares, and the aggregate number of stallions and mares is about 250. Besides these, there are two establishments for the breeding of jack stock, which have respectively twelve and twenty-four head. The success which has been attained in the breeding of Jersey cattle is even more decided than is the breeding of trotting animals. \* \* \* A dairy is run in connection with this herd of Jerseys, and the butter finds ready sale at high prices. Devon cattle are bred to some extent. \* \* \* The example is being followed by some of the most successful cotton-growers in the county. The tendency all through North-eastern Alabama is to abandon cotton planting in part and engage in stock-raising.



ing and wheat-growing. Vegetables and fruits are beginning to be cultivated for market. Cabbage, turnips, onions, sweet potatoes, asparagus, tomatoes, strawberries and many other kinds of vegetables and small fruits are now grown for market. The extraordinary yields of these vegetables have awakened an interest in truck farming, and many farmers are beginning to investigate the subject with a view to going into the business. \* \* \*

"The object-lesson which may be seen at Belvidere, in Franklin county, Tenn., upon the same character of soils is encouraging and inspiring. There is not in all the South a more pleasing agricultural region than the one which surrounds Belvidere. Twenty years ago the lands now occupied by this colony were sterilized. Old fields were abandoned, because of their poverty. These old fields are now reclaimed. Green meadows and rich pastures and broad fields of corn, wheat, oats and clover are seen on every hand. Orchards and vineyards and rich gardens occupy places that were a sterile waste twenty years ago. Land that was purchased for \$8, \$10 and \$15 per acre is now worth \$50 and \$100 per acre, and no one wishes to sell. Prosperity is seen on every hand. The prospect is one of the most pleasing which can be seen in any country."

### **Reports of Some Southern Railroad Companies.**

Some recent annual reports of prominent Southern railways show how well the general volume of business in the South has been sustained during the past year.

The report of the Southern Railway Co. for the year ending June 30, 1896, shows that the net earnings of the road were \$578,862 greater than for the year ending June, 1895. The excess of current assets over current liabilities was about \$1,000,000. During the year the company retired nearly \$400,000 worth of equipment trust notes by cash payments, and paid besides sinking fund obligations amounting to \$172,000. The amount spent for improvements and reconstructing was \$758,842. The cash outlay for rolling stock was \$1,002,987. Nearly

200 miles of steel rails were laid down during the year. The report calls attention to the fact that during the year an aggregate of nearly \$4,000,000 was spent in the erection of cotton mills along the line.

The Illinois Central Railroad Co. likewise makes a good showing. This company's gross earnings during the year amounted to \$21,000,000, the largest in the history of the company, and \$2,000,000 greater than the earnings of the year before. The passenger earnings were greater even than for the year of the Columbian Exposition. The company's earnings were \$915,512 over and above the net earnings of the year before—an increase of 13½ per cent.

The Chesapeake & Ohio Railroad also shows larger earnings last year than the year before. The freight earnings of the road were the largest in its history. The high physical condition of the road was maintained, and large expenditures were made for additional locomotives, cars, new shops, rails, etc.

The Central of Georgia Railway Co., which was recently reorganized and taken out of receiver's hands, the former receiver, Mr. H. M. Comer, being now the president of the company, was able at its last meeting to declare a dividend of 1½ per cent. on the first income bonds.

### **Trucking in Eastern North Carolina.**

The News and Observer, of Raleigh, N. C., is one of the most enterprising and wide-awake papers in the South. Its "special editions," occupied each with the exploitation of some one feature of the varied resources and capabilities of the wonderful State in which it is published, have made the paper famous and have done the State unmeasured good. Its latest achievement is an "Eastern North Carolina Fish, Fruit and Truck Edition," in which the three interests named are told about in full and satisfying detail. We take the following



from an editorial in which a few leading facts brought out in some of its articles are briefly summarized:

"From facts carefully compiled it is ascertained that in this area is planted an average of 25,000 acres per annum in vegetables and fruit—cabbage, potatoes, beans, peas, asparagus, cucumbers, spinach, tomatoes, melons and grapes, strawberries, dewberries, blackberries, pears, peaches and other fruits. This acreage will average 100 packages of vegetables per acre per annum, making 2,500,000 packages, that sell at an average of \$1.50 per package, making the trucking and berry-growing industries of this section worth at a conservative market value \$3,750,000 per annum. This, of course, includes cost of production and transportation.

"The Atlantic Coast Line shipped during the past season from points along its line between Wilson and Wilmington 105,000 crates of strawberries, a total of 3,360,000 quarts. They sold at an average of ten cents per quart, and carried into the trucking section from strawberries alone \$336,000. This does not include the entire strawberry crop, for a good percentage was shipped over other lines and sold in the local markets. It is safe to estimate this year's strawberry crop at \$500,000.

"The huckleberry crop of Sampson and Duplin counties is worth to those counties from \$100,000 to \$200,000 per annum, and has sold in one season for as much as \$250,000. These berries grow wild, and the only cost attached is for gathering, packing and transportation.

"This great semi-tropical belt of North Carolina, so productive, so mild, so beautiful and so conveniently located—it being the nearest great early truck-growing section to the big Northern markets—is destined to surpass all other sections and become in the near future more fully entitled to the distinction that has been given it, 'America's Greatest Truck Garden.'"

### **The Growth of New Orleans.**

From elaborate annual trade reviews published by the New Orleans Picayune and Times-Democrat we learn that New Orleans is making steady and rapid advances

in spite of hard times and business stagnation.

The bank clearings for the year show an increase of 11½ per cent. over the year before, the amount of the increase being \$51,000,000. The railroad and steamship business showed a good increase. The number and tonnage of vessels entering and clearing from the port were larger than any former year, the aggregate tonnage being 3,335,636 tons.

The city's foreign and coastwise imports were \$80,072,650, and exports \$122,409,616, being a total ocean trade of \$202,482,266, an increase of nearly \$10,000,000 over previous year. The grand total of the commerce of the city for the year was \$419,580,968. The manufacturing industries of New Orleans are steadily advancing, the improvement in the character of its manufactures being specially marked. There are 2068 manufactories; capital, \$45,112,000; hands employed, 37,762; value of output, \$68,412,000. In 1880 the assessment of the city was \$91,117,918; now it is \$140,566,193.

### **Pure Water and Malaria.**

The question of pure water as the sovereign antidote for so-called malarial maladies is about settled. A very interesting and conclusive addition to the testimony in demonstration of this may be found in the following article editorially contributed to the Augusta (Ga.) Chronicle by Mr. James R. Randall. Mr. Randall, whose investigations of the water problem have been made public largely through the "Southern States" magazine, says:

"Up to a comparatively recent period the city of Rome, Italy, had a well-deserved reputation for fatal fevers of the so-called malarial type. These maladies were ascribed to the atmosphere—the deadly breezes of the Campagna. Visitors to Rome during warm weather were warned to avoid the night and early morning air. Charles Warren Stoddard, in his inevitable style, tells us how he suffered tortures be-



cause his landlady insisted on shutting his windows before bedtime, and reducing him, during sleep, almost to asphyxiation.

"A friend of ours visited Rome in the hottest part of the summer, when all who could do so had fled to other localities. He was warned of his danger, but, being a man of sense and a skeptic about malaria, he disregarded every traditional precaution, and enjoyed superb health. He was satisfied that it was the Roman water supply, and not the Roman air, that sickened and killed so many people, and so he did not drink it. Like our friend, Mr. Hugh Dempsey, who is 'a temperance man, but no bigot,' he drank the wine of the country and used the water only for ablution. He allowed the air of heaven to stream through every window while he slept, and breathed it freely abroad in the morning and late at night while strolling around the Eternal City.

"Within a comparatively recent period the water supply of Rome has been changed, and a great transformation has occurred. Professor Bodio, the famous scientist, in his report, says:

"Not only is the death rate in Rome smaller than at Naples, Milan, Turin or Florence (the Eternal City showing a death rate of 25.58 per 1000, as compared with the 30.08 of Naples and 28.03 of Florence), but moreover there does not from year's end to year's end occur a single death in Rome from malarial disorders contracted in the city, the few who die there being peasants who have been stricken down by the malady in the Campania, and who have come into the metropolis for attendance. In fact, Professor Bodio's figures just published show that there is no city in all Italy so healthful and so free from malady as Rome, one of the causes of this exceptional salubrity being undoubtedly its varied and plenteous supply of pure water.

"Observe that there was not one case of so-called malarial fever originating in Rome since pure water was obtained, and that the cases occurring were those of Campagna peasants, stricken beyond the walls. The Campagna air is not the cause of the fevers there, but the shallow-surface wells produce the disease. The air of the Campagna has been biologically examined, and not a trace of poison discovered. There

are two suburbs of Rome immediately overlooking the Campagna. One is usually smitten with fever, while the other is free from it. Investigation showed that the unfortunate locality did not contain a single stream of pure water, while its neighboring settlement was blessed with a wholesome supply."

Artesian wells have been bored in many localities in the South within the last few years, and wherever the water from them has supplanted that of streams and shallow wells malaria, if it formerly existed, has disappeared.

### **Change in Southern Railway Management.**

The resignation of Mr. Wm. H. Baldwin, Jr., second vice-president of the Southern Railway, will be much regretted throughout the territory of that great system of roads. Mr. Baldwin has not only administered the affairs of the Southern with conspicuous and pronounced ability and success, but he has earned the gratitude and good-will and esteem and admiration of the South by the interest he has shown in its advancement and by his efforts to contribute to that advancement as manifested in his broad, liberal and progressive policy. He has been with the Southern since it became the Southern under the reorganization of the old Richmond & Danville two years ago. He resigns to accept the presidency of the New York & Long Island Railroad, of which the late Austin Corbin was president.

Mr. Baldwin is succeeded by Mr. W. W. Finley, who was third vice-president of the Southern, for a period of six months and resigned a few months ago to accept the vice-presidency of the Great Northern road. He now returns to the Southern to hold a higher position than he left. He is familiar with the Southern system, he is a Southerner himself, he is an able railroad man, and has had a wide experience in railroad management. It may, therefore,



be expected that the Southern and the territory it traverses will fare well at his hands; and since the company had to lose Mr. Baldwin the Southern and the South may be congratulated on the fact that Mr. Finley is to succeed him.

The October number of the "Southern States" will contain an illustrated article

on Southwestern Tennessee, a section of the South that has come into prominence by reason of the large immigration it has had within the last year or two.

The views accompanying the article on the "Hill Country of Florida" were made from photographs taken by A. S. Harper, Tallahassee.





## GENERAL NOTES.

### "King Cotton's Slaves."

Under this heading the following article, by Wallace Putnam Reed, Conyers, Ga., was published in the New York Independent of July 30:

"Within the past year or two numerous efforts have been made to establish colonies of Northern and Western people in various Southern States. It is too early to predict the final outcome of these experiments, but it is safe to say that many of the colonists will be bitterly disappointed.

"There are many localities in the South where favorable conditions invite immigration; but the strangers who rush in and pitch their tents anywhere will find many difficulties in their way, especially if they happen to be farmers. The average Southern farmer is forced by necessity to make cotton his leading crop. He is always in debt, and no merchant will credit him for supplies unless he binds himself to plant a certain number of acres in cotton and gives a mortgage on the crop.

"The country merchant, who is almost invariably a Shylock, is master of the situation. He makes himself perfectly secure, and makes his debtors pay forty or fifty cents above cash prices for his supplies. When the farmer gives a crop mortgage he is virtually the merchant's bond slave, and there is no escape. It may cost him ten cents a pound to raise cotton; but he must produce it—even when it sells as low as six cents. It is the only cash crop—the only thing that enables him to obtain a little credit. Year after year, and from one generation to another, the Southern farmer goes on in this way, never getting out of debt, never freeing himself from the merchant who holds him in bondage.

"When he is a tenant farmer his condition is worse; then he works for a share of the crop, and gets his supplies from his landlord at ruinous prices. If he gets \$200

a year out of his work he is doing well. Of course, he gets a cabin rent free and raises a part of his food supply; but he must pay for his groceries and drygoods, medicine, schoolbooks, etc.; and when he has a wife and five or six children he cannot be very comfortable on \$200. The farmer is limited in his purchases by the merchant who holds a mortgage on his crop. Sometimes, when he needs a suit of clothes for himself, or a dress for his wife, or schoolbooks for his children, the merchant will refuse to furnish them, saying that he cannot give him any further credit that year.

"The miserable serf can do nothing under such circumstances. When his Shylock creditor speaks he must obey. If he gives another mortgage, or sells any of the mortgaged cotton, the merchant can send him to the chain-gang. Nor is there any possible way for him to get hold of any cash. There is no market for his vegetables in a land where people raise their own supply. He can get nothing for fruit, and if he carries his grain to the nearest town, only a few merchants will take it in exchange for certain kinds of goods; they will not pay money for his products.

"The Northern and Western farmers who come here have an idea that their superior methods and their ability to pay cash for labor and supplies will cause them to succeed better than their Southern neighbor. This seems to be a reasonable expectation, but it is generally disappointed. There is not an instance on record of a Northern farmer who has prospered to any great extent in the South since the war. A few have been moderately successful, but nine out of ten in a few years get disheartened and fall into the ways of their neighbors. The farmer from New England or the Northwest, who settles in the cotton belt on an average farm, with cash enough to run him for the first year, will probably find himself in debt at the end of ten years;

and, worse than all, he will be some country merchant's slave, doomed to toil without hope of reward for the remainder of his life.

"Perhaps some reader will protest against these statements, and point to the newspaper accounts of the prosperous condition of some Northern farmers who have settled in the South. When they look into the matter they will place no confidence in newspaper stories of a Southern Eden, where life is a pleasant dream, and where fortunes are made almost without an effort. It is better for the South and for the outside world to let the truth come out. Settlers from the North and West can find pleasant homes and make a good living on farms in the Piedmont region and along the edges of the cotton belt; but if they plunge into the interior of the distinctively cotton territory they will be lucky indeed if they save enough out of the wreck to carry them back to their old homes.

"The failure of these settlers is not due to any unfriendly treatment from the Southerners; it is the natural result of conditions which cannot be changed for a long time to come. The South is without home markets of any considerable size, and the price of the leading staple, cotton, is fixed by dealers in New York and Liverpool. The farmers are compelled to stick to this crop, because it is the only thing that brings cash to their merchant creditors.

"The recent increase in the number of Southern cotton mills led many to hope that the South would soon manufacture her entire cotton crop, and thus keep at home the profits heretofore made by the mill owners of Old and New England. But the outlook in this direction is less hopeful since the Southern mill owners met in Atlanta, a few days ago, and decided to curtail production fifty per cent. during the summer, on the ground that the markets are glutted with a supply of cotton goods sufficient to last for three years.

"If this is the case, cotton manufacturing in the South will suddenly come to a stop for an indefinite period. King Cotton, however, will continue to reign as absolutely as ever. The toiling millions in the South who bend their servile backs under his banner cannot revolutionize their industrial conditions in one generation. They

will have to work and suffer many long years before there will be a change for the better.

"What is the remedy? It would tax the wisdom and experience of our clearest-headed statesmen, economists, business men and farmers to answer this question. The South will continue to furnish the greater part of the world's cotton, and the farmers who produce it will find it necessary to stick to it, although they know that it will always keep them in debt. What can be done to make Southern agriculture profitable? This is the important problem to be solved, and if the Northern settlers in the South can do it they will be wonderfully wise and fortunate."

### **"King Cotton's Slaves" Emancipated.**

With this title, the following article, by the editor of the "Southern States," was printed in the New York Independent of August 27:

A remarkable article, bearing the caption, "King Cotton's Slaves," and from the pen of a Georgia newspaper writer, was printed in the Independent of July 30. The purport of the article was that the Southern farmer within the cotton belt must, of necessity, make cotton his leading crop; that he is and must remain in debt to the country merchant, who, as unrelenting as Shylock, holds him in perpetual bondage; that if he grow other crops than cotton there is no market for them; that he cannot sell vegetables or fruits; that Northern and Western farmers who have moved into the cotton region have found "their superior methods and their ability to pay cash for labor and supplies" of no avail to them, but have in a few years grown disheartened and have gradually sunk into a condition of serfdom; that, specifically, "there is not an instance on record of a Northern farmer who has prospered to any great extent in the South since the war."

If the author of the article had said that Southern farmers, along with those in other parts of the country, are suffering because of low prices of all agricultural products, he would have told the truth. If he had said that the farmers in the cotton belt pursued, for the most part, for many years after the war, the fatuous policy of growing cotton exclusively and importing their food-



stuffs, and that this policy kept them hopelessly in debt to the country merchants and city factors, he would have stated a condition that did undoubtedly exist. But when he makes the averment that this condition obtains generally in the South now; when he claims that this all-cotton policy is a necessity, growing out of natural conditions; when he makes the astounding statement that no Northern farmers have prospered to any great extent in the cotton region, he contradicts facts.

The writer has traveled over nearly every part of the South frequently during the past ten years. He has been in every part of the cotton section several times within the past two years. It has been his business to study agricultural conditions and matters pertaining to agricultural immigration. He has observed closely, he has talked with all classes of people, he has maintained an extensive and continuous correspondence with the best sources of information in all parts of the South. In January, 1896, he secured reports from more than 500 trustworthy correspondents, representing every part of the cotton region. These reports, supplementing and supporting his own observations and the testimony had from bankers, merchants, railroad officials, traveling representatives of Northern business houses, from the most careful editors of local papers and from the farmers themselves, both native and immigrant, were published with an editorial introduction, from which the following paragraphs are taken:

"When cotton brought such prices as prevailed for many years after the war, it seemed to the planter much more profitable to devote himself entirely to cotton and buy his food supplies than to raise these at the cost of raising less cotton. \* \* \* The unwisdom of this course as a fixed policy became evident when cotton continually declined in value until it reached a price lower than what it cost a great majority of the growers to produce it. \* \* \* With the price at which cotton has been selling for several years past this method could not continue, of course, and farmers began to realize that to keep from starving they must raise things to eat.

"Gradually from year to year the number of hogs raised and the acreage given up to corn and other cereals and to hay and

sorghum have increased, and in 1894, in many parts of the South, these products, with fruits and vegetables, were given predominant attention, while cotton was made a subordinate crop. As a consequence, the farmers who adopted this policy had plenty to eat, and possibly something to sell, and what money their cotton brought them was in large part a surplus.

"The manifestly good effects of this method led to its wider adoption in 1895, with a corresponding improvement in the condition of the farmers.

"It may be said, by way of summarizing these reports, that Southern farmers, as a class, are less burdened with debt than they have been at any previous time since the war; that they are now more and more every year producing at home their own provisions, and becoming less and less dependent upon the West for corn, flour, pork, hay and like supplies; that, growing these things themselves, they are saving the enormous profits on them formerly paid to supply merchants; and that, living thus on their own resources, they can count largely as profit whatever they may receive for such cotton as they grow. While, as a rule, there is little money in circulation, the farmers are living better than ever before, not, of course, because of the scarcity of money, but in spite of it, and because of a wider and wiser utilization of natural resources and capabilities. It is shown, however, that in some sections the proceeds from the sale of cotton and the surplus of other crops have been more than enough to pay up back debts; and that farmers, besides buying such needed supplies as cannot be raised, are improving their farms, buying furniture, vehicles, farm implements, etc., and in some cases are lending and investing money."

That the cotton section is raising largely other things than cotton, and that, therefore, the planter, if a "slave" of "King Cotton," is so because of bad methods, and not because of adverse natural conditions, may be amply demonstrated. The principal cotton-growing States are North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, Arkansas, Tennessee. These ten States had last year something less than 19,000,000 acres in cotton. The same States (omitting Maryland, Virginia, West Virginia and

Kentucky), had 24,164,709 acres in corn, 2,266,415 acres in wheat, 3,302,153 acres in oats, 107,247 acres in rye, 126,893 acres in potatoes, 1,667,553 acres in hay. The corn acreage alone, it will be observed, was 25 per cent. greater than the cotton acreage. These figures are from reports of the statistician of the United States Agricultural Department. The Agricultural Department does not report the acreage or yield of any but these staple crops; but from the reports of the Eleventh United States Census we learn that in 1889, the census year, seven years ago, and before the South had reached its present stage in the diversification of its products, these ten States produced 75,102,728 pounds of tobacco, 127,590,574 pounds of rice, 2,367,562 bushels of peanuts, 3,443,355 bushels of peas and beans, 173,694 bushels of grass and clover seed, 22,025,824 bushels of apples, 24,715,287 bushels of peaches, 316,615 bushels of pears, 655,166 bushels of plums, market garden products to the value of nearly \$4,000,000, butter (on farms only and not including product of dairies), 139,983,386 pounds; cheese (on farms only), 329,745 pounds; milk (on farms only), 537,027,688 gallons; eggs, 128,990,924 dozen; honey, 15,151,700 pounds. The number of sheep on farms (not including sheep on ranges) was 6,284,581; the number of cattle on farms was 12,718,123; of swine, 12,311,867; of poultry, 70,822,891. Three States of these ten (North Carolina, Georgia and Tennessee) produced 704,832 gallons of wine and 4,715,200 pounds of grapes sold for table use, the market value of the wine being more than one-fourth the value of the California product, and the value of the grapes sold being 80 per cent. of the value of the California sales.

And these multifarious products are raised not only and not predominantly "in the Piedmont region and along the edges of the cotton belt," but in "the interior of the distinctively cotton territory" as well. The counties in Georgia (the State in which the author of the Independent article lives) most noted for cotton production are likewise large producers of the cereals, and are conspicuous for fruit production. What is now known as the fruit belt of Georgia is in the area of largest cotton production. The great peach orchards around Macon, Fort Valley, Tifton, Marshallville, the vine-

yards that are making their owners rich at Tifton, Morelands, Newnan, and in dozens of other localities, are all "in the interior of the distinctively cotton territory."

As to the impossibility of selling grain raised in the cotton belt, if the Piedmont farmer or the Western or Northern farmer can sell his grain, what is there to prevent the farmer in the cotton territory from selling his? All have access to the same markets; all have equal privileges in the matter of railroad transportation.

The report of the statistician of the United States Department of Agriculture for December, 1895, gives the average farm price for 1895 of various farm products in all the States. The following table shows a comparison of prices of grain in representative Northern States, with the average of prices in the ten cotton States:

	Corn.	Wheat.	Rye.	Oats.
Massachusetts ...	.52	...	.67	.34
New York.....	.45	.68	.48	.28
Pennsylvania ...	.39	.65	.50	.27
Ohio .....	.27	.60	.45	.22
Illinois .....	.22	.53	.40	.17
Iowa .....	.18	.46	.31	.14
Nebraska .....	.18	.40	.30	.14
North Dakota...	.24	.38	.27	.16
Average for ten cotton States..	.37	.71	.79	.40

Here, then, is complete refutation of the claim that the Southern farmer can get nothing for his grain.

The growing of early fruits and vegetables for Northern markets has come to be an industry of wide extent and great profitableness in all parts of the far South, particularly in the "distinctively cotton territory." During the season, daily fast express trains, on a dozen through lines, carry to the Northern cities millions of packages of berries and perishable vegetables from hundreds of stations in the heart of the cotton belt. Several steamers a day go from Norfolk to New York with less tender products, not only from the Norfolk districts, but assembled there by fast trains from North Carolina, South Carolina and Georgia. Almost daily, steamships laden with the products of the truck farms in the cotton belt start from Charleston and Savannah for the Northern coast cities.

What is said of the possibilities of agriculture in the cotton States may be emphasized by a comparison of the average value



per acre of all farm products in these States with the value of all crops in other States.

Computing this from the number of acres of cultivated land in each of the States, and the value of all farm products in each, as given in the census reports, we find the averages to be as follows:

Average value per acre of farm products, 1889. Computed from total area of land in cultivation, and total value of all farm products:

United States, as a whole.....	\$6 87
North Atlantic division.....	9 88
North Central division.....	6 03
Western division.....	6 76
Average for ten cotton States.....	8 98

As to Northern farmers in the South, for ten years or more colonies and individual settlers from the North and West have been moving to the South in constantly increasing numbers, and today scattered all over the South there are many thousands of prosperous and happy Northern families living well and making money. The writer has had within the last three years many hundreds of letters from Northern farmers who have lived in the South from one to fifteen or more years, and who bear eager and enthusiastic testimony to the wonderful agricultural advantages of the South—the “cotton territory” of the South—in soil, in diversity of products, in early maturity of crops and cheapness of producing them, in length of growing season, in low cost of living. They have proclaimed that they were infinitely better off than they would have been if they had not moved South, that they were contented and happy, and that on no account could they be induced to give up their Southern homes. Hundreds of these letters have been published, with the names and addresses of the writers of them.

The space available for this article is limited. It is impossible to make any enumeration of successful and prosperous Northern farmers and communities of Northern farmers in the South, or do more than point out one or two facts in the great mass of evidence that might be brought out to prove that the farmers in the cotton territory are no longer, as a class, the “Slaves of King Cotton:” that such of them as still remain in this bondage have open to them abundant avenues of escape afforded by a great variety of profitable

crops; that the cotton region is marvelously rich in conditions favorable to successful agriculture independently of cotton, and that these conditions are being more and more every year realized and profitably availed of by farmers from other parts of the country.

### **Cheapest Foods for Pork Production.**

The Agricultural Experiment Station at Fayetteville, Ark., has been conducting a series of experiments intended to disclose the foods most economical in pork production. The results of the experiments are given in full in Bulletin No. 41, just issued by the station. The object of the experiment was:

“1. To determine the adaptability of different crops in a rotation for hogs.

“2. The cost of rearing ten-month pigs on foods gathered by themselves and grown on soil of known fertility.

“3. To ascertain a system of rearing pigs for pork with a minimum quantity of corn.”

“The cotton farmer,” the report says, “has heretofore grown an insufficiency of corn to make his pork, and he has believed that corn was essential for rearing and fattening pigs. It has occurred to but few that other and cheaper, and perhaps better, food could be grown for that purpose.”

A summary of the results of the experiment is given as follows:

“A practical conclusion of the three objects of the experiment appears to be attained.

“1. Red clover, sorghum and peanuts were the best adapted foods for rotation. They are cheap and easy to produce, and their seasons of maturity are in convenient order for pigs to consume them. Rooting for the peanuts was too slight to injure the soil. There is no necessity for root crops for feeding with these foods. Sweet potatoes were unequal to the peanuts in palatability and fat and flesh-formers. By this system of rearing and fattening pigs the manure remains scattered over the soil from which the foods were eaten that produced it. This, together with the fact that clover and peanuts are soil-improvers, is a great advantage. Alfalfa and crimson clover are discussed under ‘Green Crops used in the Experiment.’

“2. The cost to produce a pound of pork



with a pig from birth to ten months of age on red clover, sorghum and peanuts, and six and three-fifths bushels of corn, and grown on soil that would produce twenty-five bushels of corn per acre, was one and one-half cents.

"3. The rotation of red clover, sorghum and peanuts is a system that required six and three-fifths bushels of corn to produce a hog weighing 243 pounds at ten months old. Less corn could have been fed in farm practice by keeping the pigs two weeks longer on peanuts in December, and feeding corn only while the ground was frozen. Two weeks' feeding on corn would have been sufficient to harden the pigs for slaughter."

### **Pure Water Banishes Malaria.**

Here is further confirmation of the theory that malaria cannot exist where only pure water is used. Mr. Martin J. Russell, editor of the Chicago Chronicle, writing to his paper recently from Mississippi, said of the Yazoo Delta:

"Americans of middle age will recall that in the geographies taught them in their youth the great Northwest that now includes the two Dakotas, Nebraska and Kansas—in general, all the region of the upper Missouri—was set down indiscriminately as the Great American Desert. Geographers of that day spoke without knowledge. So the Yazoo, brought into greatest conspicuity because of the siege of Vicksburg, has been ignorantly accounted a valley of death, the allegation being that it was a swamp in which the adventurer would be eaten up with ague. That indefinite thing we call malaria was said to have its chief habitat in the Yazoo valley. But people are beginning to learn something about the Yazoo as they have learned about what was once called the Great American Desert. That which we call malaria would be properly described as malaqua—the emanations of low ground do not create fevers, but the use of water for drinking purposes taken from a sluggish bayou, nurturing naturally untold quantities of disease germs. Wherever warm, still surface water filled with vegetation is drank there ague will be. This is as true on the banks of the Hudson as on the shores of the Bayou Teche. Wherever inhabitants of even the

newest country take the precaution to drink water from driven wells, sunk deep enough to avoid the dangers of surface water, they are as safe as in any part of the world. Despite a reputation arising from ignorance, the Yazoo is an exceedingly healthful region. The one precaution that must be taken is the use of good water, and that water is to be had by the simple device of sinking a driven well some forty to eighty feet."

### **The Georgia and Alabama Railway.**

Probably the most notable achievement in the past year in Southern development has been the resuscitation and rehabilitation of the old Savannah, Americus & Montgomery Railroad, which is now the Georgia & Alabama Railway. The originator of the plan of reorganization was Mr. John Skelton Williams, of Richmond, Va., who is president of the new company.

A recent circular from the banking house of John L. Williams & Sons, Richmond, makes an interesting presentation of the development of the road and its present status. We quote from the circular as follows:

"This company took possession of the old Savannah, Americus & Montgomery road in August, 1895, and has since acquired control of various branches, and made it perpetual lease, which gives the company entrance into Savannah, establishing a trunk line from Montgomery, Ala., to Savannah, 340 miles. For ten months the earnings of 288 miles, the average operated, have been \$544,305, and the net \$161,602. Interest on the preference bonds outstanding amounts to only about \$6000 a month. The line is exceedingly direct, is laid with steel, has iron and steel bridges, and with the completion of improvements under way the maximum grade will be about  $1\frac{3}{4}$  per cent.

"Large sums of money were provided in the reorganization of the road for the purpose of improving the property and bringing it up to the highest possible standard. The wisdom of these expenditures is already being shown in the reduced cost of operation and in the increased facilities provided for the handling of its growing business. The line from Montgomery to Lyons, 265 miles, is laid with 60-pound



steel rails; from Lyons to Savannah, seventy-five miles, with 63-pound rails and heavier. The Fitzgerald branch, twenty-two miles, is laid with 56-pound steel rails.

"The Georgia & Alabama Railway occupies a strong strategic position. It not only forms part of the shortest line to Savannah, the most important port on the South Atlantic coast, from the most important cities of the South, including Atlanta, Columbus, Macon and Albany, Ga., Birmingham and Mobile, Ala., and New Orleans, but as these places are recognized as 'gate cities' of the South, and all traffic going from Savannah to the West and Northwest must necessarily pass through one of these points, it follows that this route is not only the shortest by between seventy and eighty miles between Montgomery and Savannah, but is, moreover, part of the shortest line from the entire West and Northwest to the ocean at Savannah. The Georgia & Alabama Railway, in connection with the Southern Railway, with which it connects at Helena, 114 miles from Savannah, forms a line fourteen miles shorter than the main stem of the Central of Georgia Railway between Atlanta and Savannah. If the net earnings of the Georgia & Alabama Railway, the shortest line, should only amount to 40 per cent. of what the net earnings of the Central of Georgia Railway, between Atlanta and Savannah, have averaged for some years past, the Georgia & Alabama Railway would be able to pay 6 per cent. dividends on its preferred stock, after providing for all of its interest charges.

"The Georgia & Alabama passes through a region of unusual productiveness and fertility. On its eastern division the lumber and naval-stores interests are extensive and profitable. The line then continues westwardly through a region noted for its fertility. Besides its large local business, which is remunerative and increasing, the railway is developing important through business from Norfolk, Baltimore, New York and New England via the several steamship lines which run to Savannah from these points, to various points in the interior of the South, and in the South, Southwest and West. The nearest Atlantic port to Birmingham, the mining and industrial centre of the South, is Savannah, which is at the same time the largest and

most important of all the Southern ports between Baltimore and New Orleans, and the Georgia & Alabama Railway furnishes the shortest and most direct route from Birmingham to Savannah."

The circular adds: "Steps are being taken to secure for Savannah a fair proportion of the grain trade which is now passing through the port of New Orleans, much of which could be handled to equal, if not better, advantage through Savannah, on account of the great saving in distance which this route would effect, vessels thereby being saved the long journey through the Gulf of Mexico and around the Florida Keys."

### **Can the Fig be Shipped North with Flavor Unimpaired.**

The "Southern States" submits to its readers in the far South the inquiry and suggestion embodied in the following letter. It may be said, however, for the benefit of the writer of it that the flavor of the fresh fig is permanently destroyed by even a slight cooking or any allied treatment:

"221 East Avenue,

"Rochester, N. Y., Aug. 30, 1896.

"Editor 'Southern States':

"I was interested in your article in the August number of the 'Southern States,' entitled 'How to Preserve Surplus Fruits.'

"The thought came to me to perform an experiment, if not already tried, of drying, or rather evaporating, figs. I do not mean drying in the manner of the figs of commerce, but preparing them to be soaked in water, like other evaporated fruit, for the purpose of stewing.

"There are a great many Northerners who are fond of figs, but cannot indulge in them, as they will not bear transportation. The only way to procure them is to have them preserved in syrup, and then they must be excessively sweet or they will ferment on the journey.

"It seems to me that an evaporated fig might be cooked in a small amount of sugar and retain the flavor of the fresh fruit.

"Very truly,

"MRS. GILMAN H. PERKINS."

The Seaboard Air Line has taken a noteworthy step in reducing the price of its mileage books to \$40 for 2000 miles.



### **An Idea for Southern Railroads.**

The Pennsylvania Railroad offers a prize of an annual pass to the farmer on its route who is the most successful in beautifying his grounds adjoining its lines. The idea embodied in this offer might well be worked upon by the railroads of Georgia, Florida and South Carolina. Throughout the South generally, and in these three States especially, the prospect from a car window is not very encouraging to the homeseeker. The railroads pass through miles and miles of exceedingly "tough" looking country, whereas, as a matter of fact, the soil is rich and productive, and home sites upon it could be made beautiful.

The development of the fruit and melon industries along the lines of the Plant system shows what can be accomplished by a railroad when it starts in with the determination to benefit the people of its tributary territory. Thousands of dollars have been added to the value of the lands in the fruit belt, and thousands of dollars per year have been added to the income of the section by these efforts. Other railroads in the State have done much of the same kind of good work.

The Pennsylvania system, as a matter of course, has a selfish interest in offering a prize for improvements along its lines. The better a section looks the more people it will attract; the more people it attracts the more will be the development of the section; and increased development means increased production, more freight and passenger traffic, and consequently more income for the road. At the same time, while the road is working for its own interests, it is contributing to the comfort and independence of the people. People living along the lines are spurred by the offer of a prize to greater efforts in the way of making their homes beautiful or their lands productive. Whether they win the prize or not they have the increased value of their possessions as a reward for their efforts. Their pride is stimulated, and they go on from year to year making improvements. These improvements do not escape the watchful eyes of people who are looking for a desirable place in which to settle, and immigration of the class most wanted is induced where home life appears to be attractive and comfortable. Well kept houses and

grounds betoken thrift and prosperity, and desirable immigrants seek communities that present these outward signs.—Savannah News.

### **Immigrants for Texas.**

The most picturesque group of immigrants that the officials have seen in many months are now at Ellis Island. There are about fifty of them. They came from Poland, Ezvethrow, Austrian Poland, and are bound for Bremond, Texas, where they are to settle on farms.

Some of the men dress in black and white. They wear white tunics reaching to the knees, black waistcoats and long boots. Many of the men and women wear white jackets, with a sash of red across the breast and down the back. The women have gaudy head-dresses of scarlet.

Women as well as men wear long boots, but the children and some of the big girls show bare feet and ankles. Bearskin caps and coats are also a favorite style of garb with the peasants, who are big and rugged. The hair of the men in many cases hangs straight down over the forehead. The peasants went to hotels at Nos. 14 and 53 Greenwich street, and today will leave for their destination.—New York World.

A party of 110 Russian immigrants recently arrived at Galveston, having gone direct to that city from Europe. They will engage in farming in Texas.

Messrs. Littleton T. Dryden, State superintendent of immigration, and Mr. Von der Hoogt, secretary of the State board of immigration, have prepared and will soon have ready for issue a very complete and elaborate book on the resources and capabilities of Maryland.

A colony of Hollanders from Missouri, Iowa and Michigan will settle in Caroline county, Maryland. Mr. G. J. Westervelt, a member of the colony, was induced to visit Maryland a few months ago through the influence of Secretary Von der Hoogt. After inspecting lands on the Eastern Shore, Mr. Westervelt returned to Missouri and made a favorable report, as result of which a number of his neighbors decided to move to Maryland. The colony



will occupy a tract of about 2500 acres on the Choptank river, which will be divided into farms of fifty acres each. The colonists will engage principally in truck farming.

Mr. A. Jeffers, editor of the *Cornucopia*, Norfolk, Va., has issued a very complete map of Norfolk and its environs.

A new rice-milling company, called the People's Independent Rice Mill Co., Ltd., has been organized to build a rice mill at Crowley, La., which will cost about \$40,000 and have a capacity of about 400 barrels in twelve hours.

The Maryland Bohemian Colonization Co., incorporated some months ago in Baltimore, has under consideration the purchase of a large tract of land in Anne Arundel county, to be divided into small farms and colonized by Bohemians.

The Southern Pacific Railway Co. is conducting negotiations with an Austrian agency which it expects to result in the colonizing of a large number of Austrians in Southwest Louisiana.

## CORRESPONDENCE.

### Foreign Immigration.

#### *Editor Southern States:*

I have had the pleasure of meeting here a very intelligent gentleman from Leavenworth, Kan., Dr. E. Christiansen, who has presented to me some very practical suggestions as to securing good immigrants for the South.

His views are so sound and have so much pith in them that I give them to your readers for reflection and utilizing. I give his ideas to you in his own words:

"By diligent labor a large portion of the agricultural immigrants from England, Scandinavia, Germany and France could be prevailed upon to seek homes in the Southern States.

"Political dissatisfaction in Schleswig-Holstein and Alsace-Lorraine drives thousands of well-to-do farmers annually from their native soil, without any positive view as to the final end of their journey. One great reason for their immigration is that

every able-bodied German must serve three years in the army.

"If bureaus could be established at the main points of embarkation, under the management of well-qualified parties, a large percentage of this most desirable class could be directed to the South.

"I served in the capacity of assistant-surgeon in Castle Garden, New York, in 1873, where I learned that, particularly among the farmers, many landed without the remotest idea where to find a suitable piece of land to settle upon and to make their home.

"With assiduous work among this class before they arrive at our shores, a large number of the better circumstanced could be carried South.

"My plan would be to establish a general bureau at Hamburg, with branches at the most desirable ports of embarkation. Such bureaus should be equipped with good and accurate maps of lands for sale, showing, by the shading, for what purpose they are best adapted, and giving the agents' prices and terms, and small folders in plenty for general distribution. These latter should have numerous and desirable illustrations. Parties selecting a certain location should be furnished with contracts by the agents, with the provision always that such particular piece of land is not taken in the interim.

"The respective European agents should make semi-weekly reports to the general bureau, to prevent taken-up lands remaining on the maps as still on the market.

"It should be further the duty of such agents to provide purchasers or others with the address of the local agent in the South, and see that they provided themselves with the proper tickets, etc.

"Such movement would have the effect that the larger steamship companies would soon open up more direct communication with the Southern ports, and in this way lessen the cost of reaching the South from Europe and vice versa, open a more direct market with Europe for Southern and Western exports. As a second effect, it would secure the establishment of many factories in the South, and cause a larger influx of Eastern and European capital.

"If the plan was placed in the hands of men who can command the confidence of the immigrants it would result to the great-



est advantage of the Southern States, and money thus expended would prove both directly and indirectly a great blessing to our country; this part of which, rich beyond measure, is to a great extent now unused for the reason that it stands in want of desirable tillers of the soil.

"The figures of German immigration by Hamburg, Bremen, Stettin and Antwerp are interesting: 1873, 103,638; 1874, 45,112; 1875, 30,773; 1876, 28,368; 1877, 21,964; 1878, 24,217; 1879, 33,327; 1880, 106,190; 1881, 210,574; 1882, 193,869; 1883, 166,119; 1884, 143,586.

"Of the immigrants who left Europe from 1871 to 1883 the proportion from each country that came to the United States was as follows:

"From Germany, 95.80 per cent; from Sweden, 97.95 per cent.; from Denmark, 86.06 per cent.; from Switzerland, 67.12 per cent.; from Great Britain, 73.06 per cent."

All over the South are inviting attractions, where there are no long, inhospitable winters, no destructive cyclones, no insatiate droughts, and where the versatility of production, wealth of resource, delightfully temperate and unqualifiedly healthful climate, make a home of all-round charms and advantages that cannot be surpassed in the world.

I. W. AVERY.

Kansas City, Mo.

## MISCELLANEOUS.

### A Book on Texas.

"The Texarkana Gateway to Texas and the Southwest" is the name of a pamphlet of something more than 200 pages issued jointly by four great railroads interested in Texas immigration and development, the Iron Mountain, the Cotton Belt, the Texas & Pacific and the International & Great Northern. The book is one of the most satisfactory and complete in its exposition of the resources, advantages, &c., of the territory described that we have ever seen. Every county in the State reached by any one of these four roads is described separately, its character of soil, products, timbers, its streams, rainfall, temperature, yield of crops, number of acres in different crops, number of head of live stock of various sorts—all these are elaborated, together with descriptions of towns, schools, churches, banks, factories, &c. The book is most elaborately illustrated with handsome half-tones, nearly every page having from one to ten or a dozen views. Copies may be had by addressing any one of the following General Passenger Agents, H. C. Townsend, St. Louis, Mo.; E. W. LaBeaume, St. Louis, Mo.; Gaston Meslier, Dallas, Texas; D. J. Price, Palestine, Texas.

Mr. J. J. Hanesly, of Americus, Ga., is sending out a long list of farms for sale in South and Central Georgia.

The Anniston Homestead and Fruit Growers' Association, at Anniston, Ala., is the owner of 8500 acres of land which it proposes to develop and utilize on a co-operative basis. It will sell small tracts on easy terms, to be cultivated in grapes, berries, small fruits and vegetables. It will make a business of buying and shipping these products to Northern markets, thus affording the grower a regular market at home for what he raises. The association will if desired plant and care for vineyards and orchards for non-residents at a stipulated yearly sum. The plans of the association are set forth in pamphlets it is sending out. Capt. D. H. Elliott, who was Land Commissioner in Florida of the Plant System for several years, and, until the abolishment of the office a few months ago, is now special agent of the Anniston Association.

The Dunkard colony established some months ago at Fruitdale, Ala., has issued a pamphlet entitled "The Southern Almanac and Handbook." It contains much information about the South, and an account of the Fruitdale colony. Copies may be had for ten cents from the Brethren's School Company, Fruitdale, Ala.

Agents looking for land suitable for colonization may find what they want by writing to Julius T. Dudley, Attorney at Law, Bennettsville, S. C., who advertises in this issue that he controls a number of farms in the Carolinas among the long-leaf pines.

## W. W. DUSON & BRO. Crowley, La.

Will furnish you with maps and their new book "*Come and See*," which will give you full information about

## Southwest Louisiana.

Ten thousand Northern and Western people have located there, and are fast growing rich. They raise rice, sugar-cane, corn, oats, hay, cotton, vegetables and fruit. Stock summer and winter without care or attention. Pure water, healthy climate, good churches and schools.

**CROWLEY**, the County Seat of Acadia Parish, is a thriving northern town that offers *unexcelled* opportunities for the investment of capital, or as a home for Northern people. Every dollar invested there will more than double in the next twelve months.

WRITE US.



# THE SOUTHERN STATES.

OCTOBER, 1896.

## FURTHER TESTIMONY AS TO THE PROFITABLENESS OF FARMING IN THE SOUTH.

The "Southern States" undertakes not simply to contradict, but to refute completely any false and damaging utterance concerning the South that may come to its knowledge. It has already given considerable attention to an article recently contributed by a Georgia newspaper writer to a New York periodical of high standing and wide circulation. Following what was printed in the September number, it presents in this issue a number of letters from persons in different parts of the South who are best qualified to judge of agricultural conditions in their respective localities. In order that the statistical and other facts brought out in the last number, together with the accompanying statements of bankers and others, might be supplemented by a further array of testimony, to the end that the demonstration might be made so conclusive and incontestible as to take away from the minds of readers all shadow of uncertainty or doubt, a statement of facts bearing on the question at issue was solicited from authoritative sources in different parts of the cotton region. The essential parts of the letters that have come in in answer to that request are given below.

It should be borne in mind that the improvement in the condition of Southern farmers that is shown to exist has been brought about not by any enlarged sale or higher price for their products, but rather in the face of and in spite of the opposite condition, and as a result of economies and improved

methods that have been enforced by a restricted market and continuously diminishing prices.

Some of the writers of these letters point out this fact. Prof. R. L. Bennett, director of the Arkansas Agricultural Experiment Station, says: "The reason for this better condition is the decline in cotton. It has forced them to grow food supplies for themselves and live stock, and to grow in addition to cotton other products for market."

That in the "hard times" now prevailing the Southern farmers are suffering less than those of the North because of more favorable natural conditions, and notwithstanding a general prevalence of less thrifty methods, is strikingly emphasized by the statistics in the letter from Prof. S. M. Tracy, director of the Mississippi Agricultural Experiment Station.

**From HON. WM. C. OATES,  
Governor of Alabama, Montgomery, Ala.**

The article headed "King Cotton's Slaves," written by Mr. Wallace Putnam Reed, so far as it describes the unprogressive and hopeless class of the Southern farmer, is a pretty true picture. The old method pursued several years ago was for the farmer to buy from his merchant all his supplies, and in consideration of the advances made by the merchant he was given a mortgage upon the cotton crop, in which it was set forth about what the crop should be. Mr. Reed seems to think it costs ten cents per



pound to produce cotton. It did cost that twenty years ago when the system he speaks of was more or less prevalent, but now with the improved methods of agriculture cotton can be produced at an average cost of about five cents per pound, and all the farmer realizes above that is clear profit. But the error of Mr. Reed is that he has observed only the non-progressive class, and has not inquired diligently into the true condition which prevails today. Let us take, for example, to show the true erroneousness of his conclusions, a few examples. Here near Montgomery is a Mr. Scott, a Northern man and a republican in politics, who came here about twenty years ago with some means and bought land and improved it a few miles out of this city. He produces not only cotton crops, but splendid grain of nearly every variety, raises fine stock, and has much butter and milk for sale, besides fruits and vegetables, and finds in this little city a market for all of his products, and he is a right prosperous man. It has all resulted in his attending to his own business, practicing industry and reasonable economy; and any man, whether from the North or a native Southerner, who will farm and apply common sense to it like Mr. Scott has done can prosper in like manner. I am personally acquainted with large numbers of farmers in this State who, by producing their meats, their grain, their bread and nearly everything to live upon at home, and who have made cotton only their surplus crop, and have kept out of debt, are today well-to-do, and in most cases are lenders instead of borrowers of money. Under the old regime the class of farmers described by Mr. Reed made nothing but cotton, and depended upon buying everything they consumed. We find such men buying the grocery-store turnips, cabbages and other things raised in the Northern States and shipped down here for sale, and also fruits and canned goods, when they could have produced all these things in abundance and had them to

sell to the grocerymen instead of buying from them. What we want in the Southern States is an additional number of such farmers as Mr. Scott—those who will raise meat, poultry, vegetables and whatever they may need on which to live, with a small surplus to sell, and make cotton their surplus crop—and then we will have more general prosperity among our farming classes.

I have carefully read your very full and elaborate reply to Mr. Reed's article, and entirely approve it. I most fully agree with you.

**From DR. CHAS. W. DABNEY, Jr.,  
Assistant Secretary United States Department of Agriculture, and President of the University of Tennessee.**

I have read the article in your paper copied from the New York Independent, entitled "King Cotton's Slaves." I am surprised that so admirable and usually so careful a paper as the Independent should publish such a one-sided, not to say misleading, article as this.

In the first place, it is not true that the average Southern farmer is compelled to make cotton his leading crop. There are thousands of well-to-do farmers in the South who only plant cotton as a surplus crop, and as a general thing they are as prosperous as the farmers of other sections of the country. There is no country in the world more susceptible of diversified agriculture than the South. This being true, the farmer who refuses to plant anything but cotton is simply lacking in enterprise and has not studied his best interests.

One of the main causes of the prosperity of the cotton planters before the war was that they produced everything on the plantation it was possible to produce.

Their plantations were almost self-sustaining. Those plantations, with the same industry and prudent management, can be made just as self-sustaining today. The rapid-transit system, which the old-time planters did not have, has opened up the city mar-



kets so that they can really diversify their crops to greater advantage than ever before. Many have done this, and have made money supplying the Northern markets with "truck," melons and other fruits. I do not think Southern farmers are any more in debt than farmers in other sections of the country. In fact, if the census of 1890 is correct, they are not, or were not at that time. This report shows that the percentage of farms in the South under mortgage was very small compared with those in the North and West. Within the past few years there has been a great change in the South for the better. Many planters have raised their own supplies and are in a more independent condition than for many years past. They are beginning to learn by experience that overproduction of cotton is ruinous; that the secret of success is to make their own supplies as far as possible, and raise cotton as a surplus crop. What the South needs is greater diversity in agriculture, so that the overproduction of cotton may be checked; a more intensive system of farming, so that one acre may be made to produce what it now requires two or more to produce.

With prudent management and industry there is no reason why the Southern farmer, native or foreign, may not prosper.

**From HON. A. J. McLAURIN,  
Governor of Mississippi, Jackson, Miss.**

The statements of Mr. Reed's article in the Independent, in reference to the farmers of the South, are untrue. There is no place in the world where a farmer can be more independent than in the South. He can raise here almost everything that he consumes—indeed, everything except his clothing.

**From PROF. R. J. REDDING,  
Director Georgia Experiment Station,  
Experiment, Ga.**

The first proposition in Mr. Reed's article, "the average Southern farmer

is forced by necessity to make cotton his leading crop," is certainly not true, according to my experience and observation. It is quite true that many Southern farmers do make cotton their leading crop, and a good proportion of these make it a good paying crop. It is naturally a leading crop, and must, or will, continue to be so long as the world demands an increasing supply of this staple, and our climatic and other conditions give us a practical monopoly of its production. But the average farmer is under no such necessity as charged; it is only an imaginary requirement. Until within the last five years or more the charge so baldly made had some show of foundation in fact; but there is no fact more patent to the really close observer than the slow but sure development of a more independent and self-sustaining system of farming. But this improved system does not by any means exclude cotton from a very prominent place of every well-ordered farm. Under the slipshod methods that almost universally prevailed in the South, an inheritance from the times of slavery, encouraged by the extraordinary prices commanded by cotton for some years after the war, the planting of cotton was simply a game of chance, a purely speculative business. Very many thousands of farmers became embarrassed when prices fell, and were apparently forced to obey the requirements of their supply merchants and factors. But these conditions are rapidly passing away, and cannot now be truthfully said to be characteristic of Southern farming. The farmers are less in debt than they have been in twenty years, and the proportion of the whole that are prospering in their vocation is constantly increasing, notwithstanding the general depression that has overspread every kind of productive enterprise.

Moreover, even if it were true that the "average Southern farmer is forced by necessity to make cotton his leading crop," and it could be shown (which has not been attempted) that



such necessity condemns him to a life of hopeless serfdom (which I emphatically deny), it would be a very wild jump to a conclusion to assume that the Northern or Western farmer who settles in the South would be constrained, by some irresistible force, to assume the same yoke of serfdom, or even to "make cotton his leading crop." The actual facts are opposed to Mr. Reed's conclusions and statements. A very large proportion of the Northern and Western farmers who have come South have not even made cotton their leading crop. Many of them have engaged in fruit and truck farming, dairying, stock-raising, etc., and are prospering quite as well as their old neighbors whom they left behind to grow potatoes at ten cents per bushel.

Mr. Reed's view of the situation is altogether pessimistic; he has grouped together, in one short article, into a sort of "omnium gatherum," all the unfavorable conditions, practices and customs that have either existed or have been alleged to exist by all the writers who have seen proper to enlighten the world on the subject of Southern farming for the past twenty-five years. But he has not shown that any of these conditions are essentially related to Southern climatic or other natural causes. The main argument of his article applies with equal force to every section of the country, North, East, West and South, and must be referred to other than natural causes. It is a period of universal industrial depression, but I believe the South is suffering even less than other sections.

From PROF. S. M. TRACY,  
Director Mississippi Experiment Station,  
Agricultural College, Miss.

"King Cotton's Slaves" could not have been written by one who knows anything of the present financial condition of the South, and I want to call attention to one of the most serious errors. The main idea in the article is that the Southern farmer is hopelessly in debt, and that there is little probability that he can ever better his

condition. As a matter of fact, the Southern farmer is more nearly free from debt than is the farmer in any other part of the country, as may be seen by anyone who will take the trouble to examine the report of the eleventh census. That report shows that of the farms in the United States which are cultivated by their owners, 18.60 per cent. are under mortgage. In Alabama, Georgia, Florida, Mississippi and Texas, only 2.1 per cent. of such farms are mortgaged. The same report shows the total indebtedness secured by mortgage in those six States to be \$27.17 per capita, against an average of \$96 per capita for the whole United States. The public debts in these States is also much less than the average, being only \$12.09 per capita, while that of the whole country is \$18.13 per capita. Mississippi is the most distinctively farming State in the group, and her debts are the smallest of any, reaching a total of only \$19.66 per capita, or about 17 per cent. of the average per capita indebtedness of the United States. The six States named have a total debt, including both public debts and those secured by mortgage, amounting to only 6.5 per cent. of their valuation, while the average indebtedness for the whole country amounts to 11 per cent. of its wealth.

For many years I have made it my business to talk with merchants, bankers and county clerks in this and other States in regard to the condition of the farmers in different sections of the South. The statements received have been almost uniformly to the effect that the numbers and amounts of crop mortgages are decreasing from 10 to 20 per cent. annually, and that mortgages on land are seldom given except for deferred payments on their purchase. The average life of these mortgages is a little more than three years, and they are seldom renewed.

The average Southern farmer is not "forced by necessity to make cotton his leading crop," and he no longer does so. The corn crop of the South



has had a higher cash value than has the cotton crop during the last two years. The Southern farmer is no more dependent on cotton than is the Northern farmer on wheat. It is true that Northern farmers have come here and failed, but nine out of every ten such would have been failures if they had remained in the North. In nine cases out of ten the farmer who had sufficient energy, industry and intelligence to succeed in the North, has succeeded still better here.

**From PROF. R. L. BENNETT,  
Director Agricultural Experiment Station  
Fayetteville, Ark.**

Notwithstanding the decline in the price of cotton for the past three or four years the farmers in the cotton sections of Arkansas are in a much better condition than ever before. The reason for this better condition is the decline of cotton. It has forced them to grow food supplies for themselves and live stock, and to grow in addition to cotton other products for market. The most prosperous farmers and farming communities in Arkansas (and there are many) are those that do not grow cotton, or, if they grow it, do so with other crops. Good soil and a mild climate have always made it easy for farmers in Arkansas to make a living and money, if they wanted it, by farming, so that many farmers have been content to take life easy and continue the culture of cotton rather than to bother themselves to learn how to cultivate other crops. But at the present time, with low-price cotton, the essential reason that many cotton farmers continue to grow cotton exclusively is that they know little, if anything, about producing other market products. Making cheese or growing truck, etc., requires experience and training. But these, under the force of low-price cotton, the cotton farmer is rapidly acquiring, as well as learning better methods of preparation, cultivation and other economic farm questions. As to the success of Northern farmers in Arkansas, it is

extremely rare that one is found that is otherwise than successful.

**From PROF. J. H. CONNELL,  
Director Texas Agricultural Experiment  
Stations, College Station, Texas.**

I must take issue with Mr. Reed's statement concerning the colonies of Northern and Western people in the South, that "it is too early to predict the final outcome of these experiments." As an experimentalist, I am prepared to state that these experiments have borne full fruit, and in this section of the Southern States there are hundreds and thousands of Northern and Western people who have already succeeded in their agricultural operations to the full extent of their hopes. I have many letters to this effect, but since the limits of your columns will not permit a free use of these, I beg leave to present the names and postoffice addresses of a few of these men who can be found in various parts of this State. I have no doubt that they will be pleased to answer correspondence and testify to the many unused opportunities that exist in the agricultural fields of this State that but await the industrious hand to develop valuable properties, a pleasant livelihood, excellent educational advantages and contribute to the upbuilding of the greatest State in the Union.

There is indisputable evidence in my hands that many of those whose names occur in this list have not only gained a livelihood in this State, but have accumulated farms ranging in value from \$5000 to \$25,000. Some of them were known as poor men when they first came to this State. It is true that they are not now millionaires, but they have found more than a competency in the dairy business, breeding pure-bred live stock, fruit-raising, truck-farming and other agricultural lines.

There are many large communities in this State in which more than 50 per cent. of the inhabitants are Northern and Western people, who devote all of their energies to trucking and orcharding. The success of these



communities cannot be questioned when it is known that the lands utilized in the production of crops have risen in their hands from a value of \$8 or \$10 to \$50 per acre. As another evidence of their prosperity, we will find their barns, outbuildings and fences in a high state of repair. Improvements are constantly being pushed forward, and the orcharding and trucking interests of these communities grow apace. Without the Northern and Western intelligence and capital I fear that these communities would be but in an "experimental stage."

Similarly there are entire counties in our State devoted to the production of improved live stock, in which occupation the Northern and Western population dominates, and though a Southern man, I must recognize the fact that the Northern and Western people have served in no small degree to place this State first in the ranks of her sister-States in cotton production, raising of horses and cattle, and near the front in pork production.

In addition to the few names presented below I can supply many others if desired: D. B. Poage, Beeville; Alfred Wahlberg, Skidmore; Mr. Stevens, Normanna; O. M. Peterson, Normanna; L. C. Ross, Beeville; Mr. Woodmanse, Skidmore; S. A. McHenry, Beeville; Viggo Kohler, Beeville; G. J. Swickheimer, Quincy; J. C. Thompson, Mathis; John Willocy, Portland; W. H. Love, McKinney; T. A. Coleman, McKinney; John Ransom, Allen; H. E. Singleton, Lebanon; E. Milligan, Anna; J. A. Forsythe, McKinney; E. S. Stockwell, Alvin; F. P. Allen, Alvin; R. H. Bushway, Alvin; Mr. Cox, Alvin; E. A. Taylor, Arcadia; S. K. Wheeler, Arcadia; James Akin, Hitchcock; J. H. Roberts, Liverpool; E. L. Rugg, Alvin; G. H. Cook, Alvin; Marshall & Son, Mesquite; R. R. Lawther, Dallas; John De Vlaming, Dallas; John Field, Dallas; W. J. Warren, Dallas; H. O. Samuels, Dallas; Walter Caruth, Sr., Dallas; H. E. Singleton, Lebanon; Mr. Letot, Letot; A. Kramer, Elm Mot; Tom Saxton, Moody; J. N. Alexander,

Charles Battoile, Elm Mot; John Solam, Waxahatchie, Texas.

In conclusion, Mr. Editor, I am unable to understand why a well-posted man should fly in the face of facts to the extent that Mr. Reed, of Conyers, Ga., has done in this diatribe against the "Shylock merchants" and the "miserable Southern serfs." If not fully informed upon Southern conditions, there was no call to write the article; if well informed, it convicts the author of malice and spleen, which is rarely vented through our public prints.

**From H. B. BATTLE, Ph. D.,  
Director N. C. Agricultural Experiment  
Station, Raleigh, N. C.**

I have read the article extracted from the Independent, entitled "King Cotton's Slaves," with surprise and much regret. The writer greatly exaggerates the conditions mentioned. The existing conditions in certain localities may possibly have given rise to the statement in a modified form, but it is certainly incorrect for a large majority of section. Besides the cotton crop, other staples, such as tobacco, grain, market truck, poultry, eggs, etc., furnish ready money and a comfortable living.

**From HON. W. G. VINCENHELLER,  
Commissioner of Mines, Manufactures  
and Agriculture of Arkansas,  
Little Rock, Ark.**

I apprehend a pessimist could find much to complain of in every section of the United States for the last few years. We know of no enterprise or avocation (except, perhaps, gold mining) which has prospered of late. Mr. Reed places this sad condition of cotton farmers "within the past year or two." His statements, if true, apply with equal force to the entire country, and, indeed, to every enterprise in the land as well as cotton farming. Every industry has felt the blighting touch of an unprecedented money stringency for three years past. The cotton farmers of the South have not escaped this fiery ordeal, although it is a fact



the South has suffered less in these trying years than any other portion of the country. We have had fewer failures and less distress and want in the South than any other section.

I do not hesitate to say, therefore, that Mr. Reed misrepresents the real condition of the cotton farmers of the South, and especially in Arkansas; ignorantly and not maliciously I hope.

I have for four years past been making frequent visits and delivering lectures on diversified farming to cotton planters in Arkansas, and think I know their condition as well as anyone possibly can, and I say unequivocally that they are in better condition in many respects than they have been in twenty years, notwithstanding the pressure of the times in money matters, for the reason they have been turning their attention more to producing their own supplies, growing more corn, oats, wheat, hay, hogs, etc. The farmer in Arkansas who is now buying meat, corn and hay is the exception. Large sections of our State once devoted almost exclusively to cotton-growing now ship train loads of strawberries and early potatoes to Northern and Eastern markets annually. The railroad companies were quick to observe the change, and gave us special fast freight trains and refrigerator cars for our fruits and vegetables. Two points on one of our railroads shipped last year over 500 carloads of apples alone. Another cotton-growing section shipped 521 carloads of strawberries last season. Our small farmers are planting out orchards and small fruits, potatoes and vegetables largely, diversifying their crops and becoming more independent year by year.

Dunn & Co.'s Commercial Agency, after a thorough investigation of the condition of the crop and financial status of the farmers and merchants of Arkansas to August 1, whilst reporting a short crop, on account of the unusual hot and dry summer, say the farmers have made fewer debts in making the crop, and merchants will be able to collect on advances, etc.

Arkansas has had a large influx of immigrants from the North and East in the last three years. In consequence, our vacant lands have gone up in price, and these people are building homes, and are well satisfied with the change. Whatever may be the sad lot of farmers in the cotton belt in the State of Georgia, according to the report of Mr. Reed, I insist that his wholesale defamation of land owners and merchants as "Shylocks" is not true as to Arkansas. We have not an Eldorado, or land of perpetual youth, but anyone who wants to build a home for himself and loved ones can do so in Arkansas cheaply and with comparative ease, in the cotton belt or elsewhere.

**From T. K. BRUNER, Esq.,  
Secretary North Carolina Board of  
Agriculture.**

It is a remarkable paper from the fact, so far as North Carolina, one of the cotton States, is concerned, that its matter is fully ten years behind the times. There was a time in the history of cotton-planting in North Carolina, when some of his statements might have applied. But that time has happily gone by these many years ago. The farmer in North Carolina is intelligent and keenly alert to his best interests, and he has long since found that prosperity does not stalk in the wake of a single money crop, while the family supplies are grown and shipped from the West. No, no, his smokehouse is now on his own farm, and not in Chicago or Kansas City; his neighborhood roller mill converts the wheat from his own fields, and the old water mill on the creek grinds his corn. His horses and cattle are fed from the grass-covered slopes of his native hills, and not from the prairie grass of the West. His fields grow corn, wheat, barley, rye, buckwheat, peas, beans, grass, clover, sorghum, sweet and Irish potatoes, peanuts, grapes, figs, small fruits, apples, peaches, pears and all vegetables. His improved cattle are on a thousand hills; his table is sup-



plied with butter from neighborhood creameries; his horses are thorough and standard bred; his sheep gambol on the green sward near babbling brooks; his fine porkers run on clover and his barnyard is resonant with the cackle of the industrious hen. These supply both local and foreign markets.

The State produced last year, according to the returns of the United States Department of Agriculture, 36,378,412 bushels of corn, 4,748,552 bushels of wheat, 7,652,333 bushels of oats, 1,461,026 bushels of Irish potatoes and nearly \$3,000,000 worth of hay. Besides these, her cotton crop was worth \$12,000,000, and her bright tobacco brought \$10,000,000 more. These leading figures show that the North Carolina farmer has opened his eyes; that he is a slave to no man nor set of men; that he produces what he needs for home consumption, and that he sells for cash his cotton, tobacco, peanuts and other surplus crops. He is not a slave to cotton, because he can live in comfort without growing a pound if he so chooses. Mr. Reed is writing ancient history. He is not abreast of the times in the Old North State, at least. The farmer here is emancipated. I am sorry for Georgia if his article describes the prevailing conditions there. We have prosperous Northern and Western settlements; men and women who have gained health and are as prosperous as farmers are anywhere, and who would not leave the State, because they are perfectly suited. And we shall have many more to join them.

**From J. H. McCALL, Esq.,  
President Merchants and Farmers' Bank,  
Quitman, Ga.**

Just why Wallace Putnam Reed should have undertaken to slander Georgia as he did is somewhat a mystery, unless, perchance, he was seeking a little cheap notoriety at the cost of his reputation. In refutation of his slander of Georgia, take this town and county (Brooks) to illustrate. We have two banks here, the capital of

which is largely made up from the farmers, and the deposits are mostly from this class, and I have seen in one bank alone the deposits amount to \$130,000. We have some Western and Northern farmers settled in this county, and all have done well, and in most cases are better off than when they came here. Some have added 25 to 50 per cent. to their property.

**From S. H. DENT, Esq.,  
President Eufaula National Bank,  
Eufaula, Ala.**

The article in question is sensational, but far from presenting a correct condition of affairs in the South, certainly as applied to that part of the South with which I am familiar. The editor of the "Southern States" has successfully answered the statements contained in Mr. Reed's article by furnishing facts and figures which cannot be disputed.

One fact is often worth more than all the theories that can be stated, and one single object-lesson frequently throws more light on conditions than any general statement can do.

I propose, as a further refutation of the article in the Independent, to state a fact that recently came to my knowledge. The writer was standing on the street of this little town recently talking with some farmers. One of them looked down the street and remarked, "why there is young P——. He must be up here visiting his friends. You know he went down into an adjoining county five or six years ago without a dollar in money and no capital except his own strong arms and stout heart. He is now doing well; owns real and personal property worth, at a low estimate, \$3000, and owes nothing and is making a good living and something over."

The writer asked, "How do you know he is doing so well and owns that much property?" The answer was, "I know because I visited him at his home, saw his land and other property, and know that it is worth every cent that I have stated it to be." We then went up and spoke to young P—,



who said he was "doing very well; had no cause of complaint; was not bothering himself about financial theories or ratios, but was looking after his own affairs and attending strictly to his own business."

The conditions under which this young man farmed and succeeded (for farming was his business) were the same that surrounded hundreds of other farmers in the South. What he accomplished can be duplicated by any industrious, economical and prudent young man with good judgment and fair common sense. Many of our farmers are fast becoming independent; are making their farms self-sustaining, and all we need to bring peace and prosperity are stable conditions and returning confidence. May we soon have them.

**From H. N. BEAM, Esq.,  
President Bank of Beebe, Beebe, Ark.**

While there is this season a general depression felt by our farmers and merchants alike on account of a shortness of crops caused by the first serious drought we have had in this country in twenty years, still I do most emphatically deny that there is a condition of serfdom existing here.

We are dealing with a thousand farmers in this section this year, and there are not a dozen out of that number that cannot and will not be free from debt by the first of next year. Nearly all of them are free now. There is no cotton bondage in this country.

The merchant is about the hardest run man to be found in this country.

I shipped several carloads of potatoes from this point last spring raised by our farmers. I shipped several carloads of hogs raised by our farmers. Thousands and thousands of bushels of fruits and vegetables are shipped from here by our farmers. We can raise and do raise a greater variety of products and more of them than any other State on the globe.

There are a lot of villainous falsehoods being circulated about us up North by Southern liars, so I am told, but we are too busy to notice them.

**From GEORGE McDONALD, Esq.,  
President Bank of Cuthbert, Cuthbert, Ga.**

The article referred to in your letter does not fit this section of Georgia.

The farmer is by no means owned by the country merchants.

Today the farming class generally live in better houses and have more comforts than at any time in the history of this section.

The indebtedness of farmers is less perhaps than ever, and, all things considered, they are quite as easy as the country merchants.

Cotton is the predominant crop, but from an unwise choice. Almost without exception, those farmers who raise corn and meat for sale are money-lenders.

The possibilities of this section are almost without limit, and the tendency is and has been for several years to diversify the crops, all to the advantage of the producer. All classes are feeling the depression, of course, but taken as a whole the people are comfortable. We have less than a dozen paupers, including "the lame, the halt and the blind," in this county, on a farm owned and operated by the county for the care of such subjects. No tramps or beggars. The article referred to certainly does this section injustice.

**From COL. D. B. DYER,  
Augusta, Ga.**

The native Southern farmers in this section are better off today than they have been at any time within my knowledge, and are undoubtedly getting out of debt. There are but few settlers in this section from the North, but those few are without exception successful. Indeed, one or two have had phenomenal "good luck." A gentleman came here from Brooklyn, N. Y., just at the close of the war and purchased a farm of an ex-Confederate major-general. After the trade was closed the General said to him: "I have fought you Yankees for five years, and could not whip you, but I will kill you now by starving you to death on that farm." It is needless



to say that that same Yankee is one of the most progressive and, of course, wealthiest farmers in this county. I doubt if he has raised a bale of cotton this year. Yankees do not take kindly to cotton-raising, but go into fruit-raising and diversified agriculture generally and live stock.

There is no difficulty here in raising successfully a greater variety of crops than can be raised in the North, and the fact that the farmers here are today better off than for previous years is because they are raising a greater variety of crops—living more at home.

It is not to be doubted that the advent of the Northern farmer is the most potent single factor in the development of the South.

When a Northern farmer comes here with his model farm—in other words, does his best to make a home here—he succeeds, and that is not all; he infuses new life and contributes with his pleasing, profitable, vigorous and effective work towards the up-building of the community where he lives. The same splendid results can be repeated here that have been achieved in the North. Without claiming to know all that could be known, common sense teaches me that Northern farmers can come here, and the result will prove that they could not have chosen a better or safer course.

Farming is gradually being lifted out of the rut of cotton-raising; the Northern farmer teaches a useful lesson, and emphasizes the fact that, after all, the main thing is to diversify crops.

**From J. A. WESTBROOK, Esq.,  
Mount Olive, N. C.**

I desire to speak only of my own section, the eastern part of North Carolina, which lies in the cotton belt. I am a farmer and have been all my life, yet I do not grow a lock of cotton. No man in this section is forced to grow any one thing to the exclusion of everything else. There is scarcely a limit to the demand made on the farmers of the South by the Northern and Eastern markets for all kinds of fruits

and vegetables, which grow here so abundantly and to such perfection. Our people, realizing this fact years ago, turned their attention to this industry, and cotton is no longer king, but is grown now by many of our farmers as a secondary crop.

If the article in the Independent had been written twenty-five years ago it would have truthfully described the condition of the Southern farmer at that time, but new methods arose, new issues were met, and today the condition of the farmer is better than it has been in thirty years; fewer mortgages go on record each year; he is getting nearer to a cash basis, where he can pay for what he buys without binding himself to the merchant. He has other crops than cotton on which to depend, and consequently has more money to spend during the summer than formerly. He has no need to go in debt, but, in many cases, can pay cash for everything he buys.

**From N. M. JURNEY, Esq.,  
Mount Olive, N. C.**

I have read with care and astonishment the article published in the Independent by Wallace P. Reed. There is little truth and much falsehood and misrepresentation in it. There may be now just such farmers as he describes, but they would be in the hands of "Shylock masters" North or West, and it is unjust and unfair to single out a few and make them represent the entire Southern farmer. But it is just like Harriett Beecher Stowe did when she wrote "Uncle Tom's Cabin"—made the worst appear for the whole. My observation and knowledge leads me to say that Mr. Reed handles the truth quite indifferently, so far as North Carolina is concerned. Cotton is not king, nor do I know of any farmers in the hands of "Shylock" merchants. They grow what they please, and the average industrious farmer is more independent than the average merchant. I grow cotton, but not that alone: strawberries, tobacco, potatoes, corn, etc., and speak from personal experience.



The following letter was not intended by the writer of it for the "Southern States." When the matter of Mr. Reed's article was taken up by the editor of the "Southern States," Mr. J. E. Harahan, second vice-president of the Illinois Central Railroad, sent a copy of the article to Mr. J. F. Merry, the assistant general passenger agent of the road, in charge of its Southern immigration interests. Mr. Merry, in acknowledging receipt of the article, wrote at some length in denial of its statements. His letter was forwarded to the "Southern States" by Mr. Harahan:

ILLINOIS CENTRAL R. R. CO.,

Office of Ass't Gen. Pass. Agent.

Manchester, Iowa, August 12.

J. T. Harahan, Esq.,

Second Vice-President,

Chicago, Ill.:

Dear Sir—Referring to the enclosed clipping from the New York Independent of July 30, containing an article by Wallace Putnam Reed, entitled, "King Cotton's Slaves." This article is a combination of facts and errors, with a very large percentage of the latter. I have numbered some of the points which he discusses, and will reply to them in the regular order.

No. 1. Mr. Reed states a fact when he says: "Strangers who rush in and pitch their tents anywhere in the South will find many difficulties in their way." This point is now well understood by the people of the Northwest who are changing their localities to the South, and in almost every instance we find them locating where other families have located and have been successful.

No. 2. It is not true, as stated by Mr. Reed, that cotton is the only cash crop in the South. We have, at different points on our line, Northern colonies engaged in growing fruit and vegetables with phenomenal success, and I enclose you herewith blank, "Crop Statements," which I mailed yesterday to parties at Hammond and Roseland, La., and Crystal Springs, Miss. The object is to secure over

their own signatures a statement of just what Northern men have done at these points during the six months from February 1 to July 31, 1896, and I think our friend Reed would be quite surprised if he could see some of the statements when they are returned.

No. 3. Northern and Western farmers, with their superior methods, have already demonstrated at several points on the line of our Southern division that they can engage in general farming successfully, and when Mr. Reed says that nine out of ten of these men get disheartened, he certainly does not base his information on any reports he may have from parties who have located on the line of the Illinois Central Railroad in Tennessee, Mississippi or Louisiana.

No. 4. There is no question but that newspapers and real-estate men have often overdrawn the real facts concerning the South. In their desire to advertise the advantages and resources of the South they have—some of them intentionally and others thoughtlessly—overdrawn the picture to an unwarranted extent. I have always contended that this method was against rather than in favor of securing a desirable class of immigration. Mr. Reed says: "Settlers from the North and West can find pleasant homes and make a good living on farms in the Piedmont region," which would indicate that for some reason the gentleman is prejudiced in favor of that particular locality. If he will take a trip with me to Hammond, La., I will show him a settlement of 2500 Northern people who are as successful, industrious and happy as can be found anywhere on the face of the globe.

No. 5. Mr. Reed is, in a measure, correct in stating that the South is without a home market; but he either does not know the facts, or forgets to state them, that the Illinois Central and other great lines now furnish refrigerator-car service that enables Southern farmers to ship their perishable products in good condition to



Chicago (the greatest distributing point in the United States) and to all other Northern and Eastern markets.

No. 6. Mr. Reed evidently is not aware of the number of cotton factories that have been located in the South within the past year, many of them coming from New England, and the argument that he uses, that the owners of mills have agreed to curtail production 50 per cent., is only an evidence that these mill owners are men of excellent business judgment, as the general depression in all kinds of trade is felt by cotton mills as well as by other factories. He uses this argument, of course, to show that as the South, according to his statement, can produce nothing but cotton, the cotton-growers will necessarily have a hard time of it. In fact, the entire article indicates that Mr. Reed was familiar with the conditions of the South as they existed twenty years ago, and not as they are today. If he would visit Mississippi and Louisiana, two of the cotton States, he would find plenty of old, as well as new, corn in the cribs, any number of hogs in the pastures, an improved grade of cattle and everywhere signs of successful diversified farming such as we did not have even fifteen years ago.

No. 7. "What is the remedy?" My judgment is that the remedy consists in every patriotic citizen of the United States being careful to state only what are the facts concerning the South. It has already been demonstrated beyond a question that many of the Southern States and cotton-producing States, to which Mr. Reed especially refers, are adapted to diversified farming, and the time is not far distant when the cotton-growers of the South will raise their own fruits, vegetables, meats, stock and everything that is

used upon a plantation or a farm. They will continue to grow cotton, but it will not be an exclusive crop, because it is unnecessary, and experience has already proved that it is not profitable. If the gentleman would compare the net profits of farming in the Southern States with those of the Northwest today—and here we think we are fairly prosperous—he will find that the Southern States have decidedly the advantage. To say that the South has no disadvantages is untrue. No section of country is blessed with all the advantages, and from seventeen years' experience and observation I am compelled to say that the agricultural development of the Southern States has been such as to convince me of their superior advantages. Every year Northern farmers are demonstrating that certain crops which had never been experimented with in the South are proving to be profitable, and the introduction of Northern farmers, with their new methods and their characteristic desire to experiment, has, in many places, created an entirely new and profitable system of farming in many of the Southern States.

Referring to Mr. Edmonds's letter accompanying this clipping, I want to say that, in my judgment, the "Southern States," published by Mr. Edmonds, is the best exponent of Southern conditions and facts that I have seen, and, in my judgment, the candid manner in which he presents the advantages and resources of the South is doing much toward creating a public sentiment throughout the entire Northwest in favor of the South both from an agricultural and an industrial standpoint. Yours truly,

(Signed) J. F. MERRY,  
A. G. P. A.



## TEXAS: A BRIEF REVIEW OF ITS HISTORY AND RESOURCES.

*By Gen. Thomas L. Rosser.*

At the beginning of the present century Texas was an uninhabited region without well-defined boundaries, and lying between the French possessions on the Mississippi river and the Spanish possessions on the Rio Grande, but embracing no portion of the valley of either of these two rivers.

The first European settlement made in Texas was by the French under La Salle in 1685, who, while looking for the mouth of the Mississippi river in sailing from the West Indies, was blown out of his course and ran into Matagorda Bay, and established his settlement on the Lavaca, where he built a fort, which he called St. Louis.

This region was then claimed by Spain, and learning of this lodgment of La Salle, the Spaniards in Mexico sent De Leon, in 1689, to the Lavaca to drive him off, but before the arrival of De Leon, La Salle had been assassinated and his company had dispersed.

De Leon proceeded to the Lavaca, however, and on the ruins of Fort St. Louis he built a fort and established a Mission, which he called San Francisco, and from that time on the claim of Spain to this region was not disputed, until about 1714, when an attempt was again made by the French to establish another colony, but this effort was only another failure.

In 1763 France ceded all of her American possessions to Spain, and in 1802 they were retroceded to France, who, in 1803, sold them under the name of Louisiana to the United States. In this transfer there were no specifications as to boundaries nor guaranty as to title, and the old boundary dispute was again agitated.

General Wilkinson, in command of

the American forces in Louisiana, and General Herrera, commanding the Spanish forces confronting him, made some demonstrations of hostility towards each other, but in October, 1806, agreed to regard the Sabine river as the boundary, and the Spanish troops fell back to the Arroyo Honda.

Exposed and sparsely settled, Texas was a prize in the sight of the filibuster, the pirate or the reckless and bold adventurer, and tempted such characters as Burr, Lafitte and Long to essay its conquest; but when Spain was driven out of Mexico in 1824, Texas became the undisputed possession of that young republic without the expense of blood or treasure. Prior, however, to the independence of Mexico (1819), the long-standing dispute with Spain had been settled by treaty in the acquisition by the United States of Florida, and the Sabine river was made the boundary between the United States and Texas.

Before Texas had passed out of the hands of Spain and to Mexico, one Moses Austin, a native of Connecticut, but then hailing from Missouri, and claiming to represent a community of Roman Catholics who were suffering from Protestant intolerance and persecution in the United States, petitioned the Spanish authorities in Mexico for a grant of land in Texas whereon to settle his religious followers. Austin died before the grant was made, but his son, Stephen F. Austin, as the successor of his father, was given the grant, and settled some 300 families in the neighborhood of where the city of Austin now stands.

Swarms of adventurers, invited by the salubrious climate, fertile soil and



natural resources of the country, from this time on poured into Texas, which being merely an appendage to Coahuila, a Mexican State on the lower Rio Grande, and with a sparse population east of that river, and there being little or no government there, it soon became a nest of bold, enterprising spirits, determined to shift for themselves. These bold, free, frank and liberty-loving settlers from the United States were regarded as a menace to the authorities, and in 1830 the Mexican dictator, Bustamente, forbade further immigration from the United States.

In 1833 the Americans in Texas framed a constitution and endeavored to form a new State out of Texas, but General Santa Anna, who was then President of Mexico, withheld his consent, and fearing trouble, attempted to disarm these settlers, but they resisted, and in 1836 declared their independence.

General Sam Houston, who was born in Rockbridge county, Virginia, in 1793, who had been a gallant soldier in the war of 1812, an Indian agent, a lawyer, district attorney, major-general of militia, member of Congress, and governor of the State of Tennessee, was attracted to Texas as a fertile field for adventure, and arrived on the scene about this time and settled in Nacogdoches in 1833, and was a member of the convention called that year to frame the constitution for the proposed new State.

Texas proclaimed her independence of Mexico March 2, 1836, and General Houston was made commander of the revolutionary forces, and on the 10th of March proceeded to Gonzales and took command of the poorly-armed patriots, numbering 374, who had assembled there. Santa Anna had crossed the Rio Grande with an army of 5000 men, and fell upon the frontier fort, Alamo, which was defended by the immortal Col. Wm. B. Travis and 185 men, including the renowned Davy Crockett and Colonel Bowie, of Bowie knife fame. Travis and his heroic command were finally

overpowered and captured, and all mercilessly put to death.

On the approach of Santa Anna and his large and well-equipped army, General Houston retreated, hoping to be joined by Colonel James W. F. Fannin, who, with a force of 500 men and several pieces of artillery, held Goliad. While on his way to join Houston, Fannin was intercepted by the Mexicans under General Urrea, and after two days' hard fighting was on the 20th of March induced to surrender, and then he and the 357 men who had survived the fighting were treacherously murdered in cold blood.

Houston continued his retreat across the San Jacinto river, where, on April 10, he received two pieces of artillery which had been sent him from Cincinnati, Ohio. Santa Anna, eagerly pursuing, crossed the San Jacinto river with a portion of his army, and the river suddenly and rapidly rising into a freshet, divided the Mexican army, when Houston, taking advantage of this circumstance, fell upon Santa Anna, routed his army, killing, wounding and capturing all on his side of the river, including General Santa Anna, their commander, who became his prisoner.

The result of this battle was the independence of Texas, and General Houston was chosen President of the new republic, and inaugurated October 22, 1836. Texas was admitted into the United States December 29, 1845, and at the close of the war which followed between the United States and Mexico, by the treaty of peace of Gaudalupe Hidalgo, the Rio Grande river was made the boundary between the United States and Mexico.

Texas has an area of 270,000 square miles, covering ten and one-half degrees of latitude and thirteen degrees of longitude, embracing about one-twelfth of the entire United States, exclusive of Alaska. As it is first in size, it is also first in importance, and is at this time attracting a greater and more interested notice than any other State in the Union.



The climate of Texas is healthful and equable. The average rainfall in the northeastern portion of the State is about forty-eight inches, but it is much less in the northwestern portion, where farms often suffer from drought. The northern-central portion of the State is underlaid with good bituminous coal in a belt extending from Red river, in Montague county, to the Colorado river, embracing an area of about 12,000 square miles. In the southern part of the State there are fields of the same character of coal, covering about 3700 square miles, known as the Nueces. Iron ores of good quality are found in the eastern, central and southern portions of the State; silver and lead in the mountains beyond the Pecos; copper in the north, and the gypsum deposits are the largest in the world; while marble, granite and steatite are found in nearly every part of the great State. Petroleum, though not in large quantities, has been found in several places, and so also has natural gas, and it is believed that further investigation will show each to exist in profitable abundance. There are profitable salt wells in the northeast and northwest, and deposits of rock salt have been found of considerable thickness.

The river bottoms of the prairie and coast regions of Texas abound in magnificent cotton and sugar plantations, and the swamp lands along the coast yield large crops of good rice, while the high lands in the north produce in great abundance corn, oats, wheat, rye, barley, flax, hemp, potatoes, berries and fruit, especially peaches, which are the finest in the world. Oranges, figs and pears are grown in the south, grapes all over the State, and apples in the northern section.

Texas leads all the States in the production of cotton, her annual crop amounting to over 2,000,000 bales, of 500 pounds each, raised without one pound of artificial fertilizer. The pecan tree is found indigenous along all the streams of the south and west,

and the yield of the crop annually amounts to over \$500,000. The pine belt of the Atlantic coast, extending southwest, enters Northeastern Texas, and running southwest extends as far as the Colorado river, and covers about 64,000 square miles. The cypress of large size is found in the swamps, the live oak is found in the central portion, while the sycamore, walnut, magnolia and mesquite are found in the eastern portion. The osage orange in the northeast, where it is extensively used for hedges, and the mesquite in the southeast is used for firewood and fencing.

The population of Texas is now (1896) about 2,000,000, and is growing faster than the population of any other State in the Union.

Texas is fast becoming a manufacturing State, and now has over \$50,000,000 invested, yielding over \$80,000,000 of products annually.

When Texas entered the Union the most of her vast area was public land, and the United States, not wishing to assume her liabilities, allowed her to retain her public lands for the purpose of their liquidation.

These lands became a source of great wealth to the State, and after recklessly giving to public improvement enterprises over 120,000,000 acres, she has still a large amount left for settlers, and each county has four leagues of 4228 acres each for school purposes.

The permanent school fund of the State now amounts to \$19,600,000, yielding an annual income of \$1,157,000, which has given the State a most magnificent school system, the heads of which are the University of Texas, at Austin; the Sam Houston Normal Institute, at Huntsville, for white teachers, and the Prairie View Normal Institute, at Hempstead, for colored teachers. There is also an agricultural and mechanical college in Brazos county, all of which are lavishly supported and ably administered. The last-named, under the able administration of the learned and distinguished ex-Governor L. S. Ross, is



one of the best institutions anywhere to be found in any country.

The State's eleemosynary institutions are most creditable, and her penitentiaries, two in number, one at Huntsville and the other at Rusk, as well as the reformatory for boys at Gatesville, are all humanely, ably and properly conducted. There is also an asylum for orphans at Corsicana, and there are asylums for the deaf and dumb, one for each race, white and black.

No State in the Union can boast of handsomer or more commodious public buildings, State and county, than Texas, and her granite capitol building in Austin is one of the handsomest structures in the United States, costing three and two-thirds millions of dollars, in payment for which the contractor took in lieu of the money 3,000,000 acres of land.

Until within recent years Western Texas was regarded as an arid, waste or waterless desert, where no "Pure gurgling rills the lonely desert trace," and the country was indeed cheerless and uninviting; but it has been discovered that nature has not neglected this region in bestowing its blessings, and while there is little or no water on the surface, the country is well supplied with an abundance of pure water in subterranean arteries, which may be tapped at a cost of from twenty cents to \$2 per foot, and an inexhaustible supply of the best water obtained, which flows over hills and housetops from arterial pressure and without the expense of fuel or labor to either elevate from the bowels of the earth or to heat it.

The most of these wells are in the central portion of the State, but there are no reasons why they should not be bored anywhere in the State where needed, for with the exception of the Trans-Pecos region, experiment shows them to be available and at a small cost, many of them being oper-

ated successfully without the use of tube curbing, or, if this is used, it is employed only near the surface.

The largest wells now in use are found in and around Dallas, Fort Worth and Waco.

In and about Waco there are twenty-two flowing wells from 1800 to 2000 feet deep, and discharging from 200,000 gallons to 2,000,000 gallons every twenty-four hours. This water varies in temperature from 97° to 104° Fahrenheit.

The young men of this country, especially the sons of farmers, speak of the ideal farm life in the West, where the soil is rich and requires no fertilizing stimulation to insure production. They repine that they live in an age of barren opportunities, with no fields of wealth spread out invitingly before them such as tempted their fathers who settled in the West and Northwest when starting life, and where they grew up with the country, which, as it ripened, dropped its wealth into their laps, while now these regions and all west of them are occupied by contented and prosperous proprietors, and land is so dear as to place even a few acres beyond the aspirations of the youth of the present generation who seek a home.

The time, young man, is fast coming when the vision which startles you will be indeed a reality, but it has not yet come. There are yet broad, virgin acres, as fertile and as inviting as any ever embraced within the scope of the West or Northwest (I have seen them all), and these are offered you on as easy terms and are in every way as good as any ever acquired by your ancestors, and where the expense of living is less, the climate more salubrious and which promises more safe and rapid development. You will find all this—the fulfilment of your dreams and the realization of your hopes—in Texas.



## AGRICULTURAL LOAN ASSOCIATIONS.

The volume of Consular Reports for September, issued by the Department of State, contain a very interesting account of the Agricultural Loan Association in Saxony. This association, which has become widely known, is under government control. It has been of great value to the farmers throughout the kingdom, and its securities have been held in high repute by capitalists. Mr. Thomas Wiling Peters, commercial agent at Plauen, who makes the report, says:

"For years I have been endeavoring to find some credit system that would bring our farming community into closer relations with the capitalists, to their mutual benefit.

"I have examined the Reifeisen system, probably the father of the land credit associations, which did much good to the land interest of Germany, but, owing to lack of proper government control, did also much harm, for, in some instances, the officers proved dishonest, involving the ruin of many of its members.

"The Saxon land credit associations, being under control and constant supervision of the government, makes such a disaster much more difficult, if it does not preclude it.

"After a thorough study of the above system, I am convinced that the same plan of organization may be adopted in the United States, where I believe it will flourish as it has in Saxony. The mortgage certificates of this organization, par value 100 marks, are now quoted at 102.65 marks for the  $3\frac{1}{2}$  per cent. and 103.80 marks for the 4 per cent. certificates. This is a good indication of the confidence the Saxon people have in the association.

"The farming people of the United States, when they wish to borrow, especially in the West and South, pay

a very high rate of interest. I am not writing of the great landed proprietors, who have the best borrowing facilities, but the small farmer, who has probably expended his entire capital in the purchase and equipment of his farm and finds he must borrow from \$100 to \$500 until he can market his crops. It is to this class that such an association will be of most benefit, for through its agency he is at once put in communication with the great financial centres, where he can obtain the required advance at the lowest possible interest, whereas at present he must often pay a disastrous amount to the local banker or money-lender.

"I believe that the financial associations and the individual capitalist would be glad to invest their money in the mortgage certificates of such an organization under proper control and supervision.

"The association has proved a blessing in Germany."

The purpose of the land credit association is to make loans to its members. The capital to start it was obtained from subscriptions to its stock, the association receiving funds as a savings bank and generally doing a banking business. Any owner of an estate in the Kingdom of Saxony, who is of age, independent and capable of disposing of his property, and who has not been punished for dishonorable crimes, is eligible for membership. A member can be male or female, corporations or communities, which are acknowledged to be persons in law. Every member pays an entrance fee, which is fixed every year by a committee of the association. Fifty per cent. of the amount of entrance fees goes to a sinking fund, and 50 per cent. to the payment of office expenses.

Every member must have at least



100 marks (\$23.80) in the stock of the association, and the maximum amount of stock that any member may hold is 1500 marks (\$357).

Members receive loans from the association in proportion to the stock they hold.

A member holding stock to 100 marks is entitled to a loan of 5000 marks; 200 marks, 5,000 to 20,000 marks; 300 marks, 20,000 to 30,000 marks; 400 marks, 30,000 to 45,000 marks; 500 marks, 45,000 to 60,000 marks; 600 marks, 60,000 to 80,000 marks; 700 marks, 80,000 to 100,000 marks; 800 marks, 100,000 to 150,000 marks; 900 marks, 150,000 to 200,000 marks; 1000 marks, 200,000 marks or more.

The association makes both time loans and irredeemable loans secured by mortgage. Time loans are not made for more than six months, but the board of directors may extend the time for six months more when the first six months have expired. The amount loaned cannot exceed three-fourths of the value of the property that is mortgaged to secure it. The irredeemable loans can never be called in as long as the interest is paid and the regulations of the association are observed. The amount of an irredeemable loan must not be greater than two-thirds of the value of the property.

When the association has made an irredeemable loan on mortgage, it then issues mortgage certificates guaranteed by the association and secured by mortgage; these certificates are sold to the public, and are listed on the Stock Exchange under government authority. All such certificates are divided into series, numbered, and the length, duration or time of redemption specified. Every series has a stated rate of interest.

If the borrower wishes to make a part payment on his mortgage, he may do so by buying in the open market mortgage certificates of the association of the same number and series as that of the debt, and these will be re-

ceived by the association on account of his loan.

Every member has the right to vote at general meetings of the association, and all members share in its profits in proportion to the stock they own.

The foregoing is a very brief summary of some of the salient points in this report, which is elaborate in detail.

Accompanying the report of Mr. Peters is a translation from the *Leipziger Tageblatt* relating to a statement of the Land Credit Association, which is as follows:

"The statement of this institution for the year 1895 is most favorable, and demonstrates greater and more profitable transactions than in any year of its existence.

"In 1891 there were 477 applications for loans; in 1894, 637, while in 1895 the number of applications rose to 1880.

"In former years, applications for loans hardly exceeded 10,000,000 marks (\$2,380,000); in 1895 they amounted to 36,000,000 marks. There was actually 36,382,510 marks (\$8,659,037) issued in loans, after the repayment of 5,840,547 marks (\$1,390,059.71) arising from the conversion of recallable loans into time loans, or redeemable loans, which have been deducted.

"The total sum outstanding in loans up to the end of 1895 has increased from 166,448,927 marks (\$39,614,484.46) in 1894 to 196,990,890 marks (\$46,883,832).

"It has, above all, been the aim of the association to assist the small farmers, and among the 13,461 loans granted, there are 11,537 items to this class, the highest amounting to 20,000 marks (\$4760).

"The loans granted in 1895 were at the rate of 49.87 per cent. of the value of the estates mortgaged, without regard to the buildings on the estates.

"The extraordinary favor with which the borrowing public supported the association is owing to two causes, viz, (1) the issuance of loans at 3 per cent., (2) the advantage of the redeem-



able loans, which are appreciated more and more, for the borrower may at any time pay his debt to the association in, or by the purchase of, mortgage certificates of the association, while the association can at no time demand payment of the debt (as long as the interest is paid), not even in the most unfavorable times, nor can it claim a higher rate of interest on its loans than it pays to the holders of its mortgage certificates.

"There are now in circulation 172,935,350 marks (\$41,158,861.33).

"The building, furniture, etc., valued on the books of the association at 644,700 marks (\$153,438.60) at the close of 1894, have been sold to the postal authorities for 900,000 marks (\$214,200); of this, 600,000 marks

(\$142,800) is placed to the credit of immovables of the association, 158,000 marks (\$37,604) are credited to the Mehnert fund, 100,000 marks (\$23,800) for building, and 42,000 marks (\$9996) furnishing.

"The net proceeds, including 153,368 marks (\$36,565.84) forwarded from former years, make a total of 624,277 marks (\$148,577.93). Of this sum, the special reserve fund receives 50,000 marks (\$11,904.76), the general reserve fund 30,000 marks (\$7140), the pension fund 30,000 marks (\$7140), and, furthermore, a dividend of 5 per cent. shall be declared on members' stocks, which amounted, at the time of settlement of accounts, to 8,394,846 marks (\$1,997,973.35)."





# THE SOUTHERN STATES.

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## THE SOUTHERN STATES.

AN ILLUSTRATED MONTHLY MAGAZINE  
DEVOTED TO THE SOUTH.

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BALTIMORE, OCTOBER, 1896.

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The SOUTHERN STATES is an exponent of the Immigration and Real Estate Interests and general advancement of the South, and a journal of accurate and comprehensive information about Southern resources and progress.

Its purpose is to set forth accurately and conservatively from month to month the reasons why the South is, for the farmer, the settler, the home seeker, the investor, incomparably the most attractive section of this country.

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### Food Preserving Industries in the South.

A practical demonstration of what canning factories may be made to do for the South was referred to in the "Southern States" of August. It is unquestionably true that this is an industry capable of very wide development in a large portion of the entire South, and one which would bring profitable returns to large investments of capital, give employment to thousands of laborers, and provide an enlarged market for the farmers' products. If Northern canning factories are money-making institutions—and, as a rule, they are very profitable—how much more profitable they should be when established in the South, where from two to four crops a year may be raised, where labor is abundant and cheap, because living is so much cheaper, and where every

condition unites to the advantage of the manufacturer. Especially in every present truck and fruit-raising centre of the South there is a splendid opportunity neglected, and so advantageous are these factories to contiguous produce-raisers that it is some wonder that there are not more of them established on a co-operative plan by the producers themselves. The field is an almost limitless one, for the consumption of canned goods increases rather than diminishes in any direction, and there are more canned goods consumed in the flat-houses of New York than in the mining camps and rail-roads' tents out West. Indeed, it seems that the older and more complex the civilization the greater the necessity and the demand for canned goods. We are told that they form a very large part of the fastidious cuisine of our late Celestial visitor, Earl Li Hung Chang, and a visitor to any grocery store can read for himself the labels which seem to give pre-eminence as a producer of canned goods to the country whose people are assumed to be a nation of epicures. While the Southern canner may not expect to drive French goods entirely off the market, there is no reason why he should not furnish an altogether satisfactory substitute for a great many of the vegetables which are now thought by gourmets to require the French brand upon them. By intelligent and skillful effort there should be an infinite variety of Southern products canned in the South, and if the work is done right there are hundreds of fortunes in the business, and an opportunity to build up a reputation and a demand for Southern canned goods which would open to them all the markets of the world.

The South supplies all the Northern mar-

kets with early vegetables now. With canning factories at the base of supplies, there need never be a losing shipment or an unprofitable crop, as sometimes happens now, and all the later crops could be advantageously canned.

Outside of peas, beans, corn, okra, etc., and apples, pears, peaches and other fruits for canning, a great field exists for the treatment of preserves—preserved figs, marmalades of various kinds, dried and evaporated fruits, jellies, etc., and there is no reason why extensive pickling works should not become numerous. A Louisiana man has made a peculiar sauce from red peppers, which has become famous the world over, and has made him rich. He has by no means exhausted the possibilities of the South along similar lines; where so many things grow, and grow so well, there is a large field for the exercise of ingenuity and enterprise in getting them to market.

The South is proverbially the land of the chicken, and here, too, is a vast field. The canner of meats might have a big plant, in which he could put up every variety of prepared meats, pressed beef, corned beef, minced, spiced, deviled ham, fowls, etc., or he might confine himself to chickens, turkeys and game in a smaller way, in which a very broad field is open to him. Much of the buffet-car menu is necessarily canned goods, and the growth of a demand in this direction is only one of the many ways in which the market is widening. So it is altogether unlikely that there can come any overproduction; but even should the supply of canned goods become over-large, the conditions which make cheap production possible in the South ought to serve to give this section the advantage in any competition with other sections.

All along the Atlantic and the Gulf coast lines there are additional opportunities for large and profitable operations in the canning and of pickling oysters, crabs, shrimp,

etc., for there are no better shellfish than those of Southern waters, and with proper treatment they should be in demand in all the markets.

While requiring appliances and investments on so much broader scale as to be hardly pertinent to these suggestions, yet as related to the subject in hand a word may be said about packing-houses in the South. With the best corn raised anywhere, with abundant other food of the best character, hogs can be cheaply brought to the finest marketing condition. There are a few pork-packing establishments in the South now, but there ought to be hundreds. Cattle are shipped from Texas to Kansas City and Omaha, slaughtered and sent back to Texas and New Orleans and other Southern points. It is claimed there are problems which make this apparent economic folly less glaring than it seems, but reason prompts the suggestion that these problems will yield to intelligent effort at solution, and that some day the natural and logical advantages of the situation will be utilized to the great profit of the individual and the immense advantage of the whole South.

### **Instruction in Dairying.**

The dairy business is growing in the South, but it ought to grow faster. As a means to this end, and in order that any who may want to engage in it shall be enabled to fit themselves for it by proper study and training, it would be well if agricultural colleges would give larger and more practical attention to this branch of agricultural teaching. The famous dairy school of the University of Wisconsin, at Madison, has been of inestimable value to the dairy interests of that State and of the Northwest generally, not only in promoting the development of the industry, but in lifting it to a higher plane through the improved methods it has brought about. The university operates a creamery in the Dairy



School building throughout the year, receiving milk from about sixty farmers in the vicinity of Madison, the supply varying from 6000 to 10,000 pounds per day, according to the season of the year. The products of the creamery are fancy print butter, delivered daily to families in Madison and other cities. Pasteurized cream in bottles is supplied with much success to the local trade, and daily shipments are made to Milwaukee. Pasteurized milk is supplied to invalids and ailing infants upon the prescriptions of doctors. The purpose of the creamery is not to make money, but to furnish the largest opportunity for investigation and for practical operations in dairying.

In the Dairy School there are lecturers on "The Chemistry of Milk and Its Products," "Bacteriology in Relation to the Dairy," "Physical Problems Connected with the Dairy," "The Breeds and Breeding of Dairy Cows," "Feeding the Dairy Cow," "Diseases of the Dairy Cow," and instructors in cheese-making, in milk testing, in farm dairying, in pasteurizing, in the use of the butter worker and of the separators, and the four departments of the school, the creamery, the cheese factory, the pasteurizing-room and the milk laboratory, are elaborately equipped with needed machinery and appliances.

### Farmers as Citizens.

There is so much of truth and justice in the following article taken from the Jacksonville Times-Union that we are glad not only to publish it, but to give it the prominence of a place on our editorial pages:

"The comic weeklies and the daily press of the country seem to be unable to publish a cartoon without dragging in an exaggerated caricature of the farmer, always as a populist, and generally as an anarchist, ready to burn and destroy. This is both unjust and untrue. Many farmers are populists, but all populists are not farmers, and no farmers are anarchists. The agricultu-

ral element, as a whole, comprise the best citizenship of the country. In the rural districts vice and iniquity is scarcer and patriotism is more broad and sincere than in the great centres of population. When the farmer enters politics he gives his time and work in support of his honest convictions, and if he errs, it is generally an error of the head, and not of the heart.

"In the rural districts of the South there is less of corruption and fraud in the manipulation of political campaigns and elections than in any other section of the country. The farmer may be, and doubtless is, often wrong in his convictions, but they are generally the honest belief of his mind, and embody his idea of the best policy for the public welfare. But among the farmers there is every shade of political opinion. Democracy, republicanism and populism are all represented, and when the day of election comes the ballots that they deposit will come nearer forming an honest expression of principle than those of their city neighbors who deride and ridicule them.

"To imagine that there is no intelligence among the farming class proves a lack of brain upon the part of him who holds such ideas. In some districts the facilities for education are meagre and intermittent, but such as they are they are taken advantage of more generally than in the towns and cities, and the children are compelled to attend school, though often having to walk several miles daily for the purpose. The farm life in itself conduces to thought and meditation. The mind of the city man, in daily contact with thousands of his kind, may be quicker to see and act, but that of the farmer, in constant touch with nature, is capable of taking a higher and broader view of life and its problems.

"Even as the material prosperity of the world rests upon the farmer and the productions of the labor of his hands, so does his innocent and simple influence form the foundation of our public morals. As a class, honest and incorruptible, the ridicule that is cast upon him is ill-timed and misplaced during a political campaign, and if every other class displayed an equal integrity in forming an expression of principle, no matter what might be the particular complexion of the successful party, the government would be better and purer."

### **Dried Fruits.**

A dispatch from San Francisco states that an effort is to be made to increase the exportation of dried fruits from California to Europe. They are to be hauled from the Pacific coast and across the continent to New Orleans by the Southern Pacific system and there shipped by vessels. There is probably an opportunity afforded for a profitable business of this kind, but if it can be carried on successfully by California fruit-growers, how much more profitably could it be carried on in the South! It is unnecessary to dwell upon the fact that large quantities of fruit are wasted annually in the fruit-growing sections of the South, which, by an evaporating or other inexpensive process, could be dried and made marketable. From the principal fruit-growing centres of the Southern States to the seaboard the distance is but a trifle compared with a haul of over 2500 miles from the Pacific coast to the Gulf of Mexico.

### **Farming North and South.**

The testimony as to the condition of Southern farmers, furnished by letters and quotations from newspapers, printed in this issue of the "Southern States," is well worth a careful study. A consideration of the facts brought out (which supplement and accentuate data published in former numbers of this magazine) leads to some interesting conclusions. If Southern farmers are making a better living than formerly, notwithstanding that the average prices of farm products are probably not more than half as much as they were under normal business conditions, what an enormously profitable pursuit farming in the South would have been if the methods that now obtain had prevailed during the period of better prices! And the Southern farmers, having now learned these lessons of thrift and of the application of business principles to farming that enable them to

get as large a net revenue out of the reduced gross proceeds of their operations as they formerly got out of the greater aggregate yield, what an agricultural paradise the South will be when there shall be a return of business activity and fair prices for agricultural products! And if the farmers of the South can not only maintain, but improve their status, while the farmers of the rest of the country are losing ground every year, what an overwhelming demonstration of the immeasurably superior advantages of the South for farm pursuits is afforded!

### **Decline in Number and Value of Farm Animals.**

The United States Department of Agriculture has issued a bulletin on the number and value of farm animals in the United States. From the elaborate tables of statistics presented, we learn that the total value of all farm animals in the United States was in 1890 \$2,418,766,028, and in 1896 \$1,727,926,084, a decrease of 28.6 per cent. in total value. Horses increased during that period 6.4 in number, but decreased 48.9 per cent. in total value, a falling off in value brought about to some extent, of course, by the extensive application of electricity to street cars, and the consequent abandonment of horses as a motive power. The rapid increase in the use of the bicycle is also responsible in part for the diminished use of the horse. The same explanation may be made (though applicable to a smaller degree) as to the falling off in the value of mules, which during the period mentioned decreased in number 2.2, and decreased in value 43.4. Milch cows increased 1.2 in number and 3.4 in total value, the rate of increase in value being, it will be observed, nearly three times the rate of increase in numbers. Other cattle suffered a decrease in numbers of 12.9 per cent., and a decrease in value of 9.2 per cent. Sheep fell off 13.6 in numbers and 35.3 in value, the rate of the fall in value being nearly three times that



of the fall in numbers. Swine fell off 17 per cent. in number and 23.4 in value.

The decrease of 28.6 in the total value of all farm animals, the decrease in both the number and value of all animals except milch cows, and the slight increase in the number and value of these, are the more striking in view of the increase in population during the same period, which statisticians estimate to have been at the rate of about 15 per cent.

In average value, horses suffered a decline from \$68.84 in 1890 to \$33.07 in 1896; mules, from \$78.25 in 1890 to \$45.29 in 1896. The average value of milch cows advanced from \$22.14 in 1890 to \$22.55 in 1896, and the value of other cattle from \$15.21 in 1890 to \$15.86 in 1896. Sheep fell off in average value from \$2.27 in 1890 to \$1.70 in 1896, and swine, from \$4.72 in 1890 to \$4.35 in 1896.

Considering the total value of farm animals for 1890 and 1896 by geographical divisions, the figures will be as follows:

	N. Atlantic Division.	N. Central Division.	S. Atlantic Division.
1890.	360,738,807	1,182,683,970	193,823,682
1896.	241,693,915	816,113,842	151,830,313
	<hr/>		
Dec.	119,044,892	366,570,128	41,993,369
		S. Central Division.	Western Division.
1890.....		405,077,341	276,442,228
1896.....		315,009,000	203,279,014
		<hr/>	
Decrease....		90,068,341	73,163,214

The percentage of decrease for the different divisions is as follows: North Atlantic Division, 33 per cent.; North Central Division, 30.9 per cent.; South Atlantic Division, 21.6 per cent.; South Central Division, 22.1 per cent.; Western Division, 26.4 per cent. The two Southern divisions, it will be observed, suffered much less than any other part of the country. If we compare the whole South with the rest of the country, we shall find that the decrease in

the South was 22 per cent., and in all other sections together 30.7 per cent.

In 1890 the average value of farm animals in the United States per 100 of population was \$3904; in 1896, \$2451, the difference being \$1453, the rate of decrease being 37.2 per cent. Considering the different farm animals separately, the average number and value per 100 of population was as follows:

	Horses.		Mules.		Milch Cows.	
	No.	Value.	No.	Value.	No.	Value.
1890....	23	\$1579	4	\$294	26	\$570
1896....	21	709	3	147	23	516
Pct. dec.	9.5	55	25	50	11.5	9.4

	Other cattle.		Sheep.		Swine.	
	No.	Value.	No.	Value.	No.	Value.
1890....	59	\$905	72	\$163	83	\$393
1896....	46	722	54	92	61	265
Pct. dec.	22	20.3	25	37.4	26.5	32.5

The ratio, therefore, of all farm animals to population in the United States has greatly decreased since 1890, both as to numbers and average value, the decline in value being greater than the decline in numbers, except in the case of milch cows and other cattle.

### Diminished Production and Consumption of Wheat and Corn in the United States.

It is generally assumed that there has been a very great increase in the grain production of this country in the last fifteen or twenty years. This is true as to the aggregate number of bushels produced, but relatively there has been a steady decline in grain production in the United States for twenty years. This statement will startle most persons, but it can be easily shown to be correct. In this demonstration, to avoid possibility of inaccuracy, we will consider periods of several years rather than single years. The latter would involve the danger of comparing an abnormally favorable crop year with a disastrous one, and producing in consequence inaccurate and misleading results.

Taking, say, the latter half of the decade

1870-1880, the latter half of the next decade and the first half of the present decade, we shall find the average population and the annual average crops of wheat and corn (the predominant cereals) to be as follows, the population averages being computed from figures in the 1895 Statistical Abstract of the United States, issued from the United States Bureau of Statistics, and the crop figures from reports of the United States Agricultural Department:

	Average Annual Crop.		Ratio of crop	
	Average Populat'n.	Wheat, bus.	Corn, bus.	to population. Wheat. Corn.
1876-80.	47,621,956	404,195,968	1,455,988,116	8.48 30.5
1886-90.	59,993,860	443,847,400	1,742,450,800	7.39 29.0
1891-95.	66,846,400	490,246,217	1,734,404,552	7.33 25.9

That is to say, our per capita of both wheat and corn production has been growing continuously less since 1876, and as to corn, we are producing now not only less per capita, but less in actual aggregate yield than during the last decade.

The average per capita consumption of wheat for the first half of the last decade (1881-85) was 6.2 bushels. The average for the first half of the present decade (1891-95) was 4.65 bushels. In other words, the decrease in the consumption of wheat averaged a little more than a bushel and a half (1.37) for every man, woman and child in the country. Taking the Eleventh Census estimate of an average of 4.93 persons to a family, this would mean that the aver-

age loss in consumption for every family was six and three-quarters bushels.

The average corn consumption per capita for the two periods named was, for 1881-85, 28.24 bushels, for 1891-95, 23.30 bushels, a decrease of about five bushels (4.94), or an average of twenty-four and one-third bushels (24.35) for every family in the country.

The rate of decrease in per capita consumption during the ten years was, wheat 29 per cent., corn 21 per cent.

Expressed in another way, while the average annual crops of wheat and corn are less per capita than formerly, the surplus over and above per capita consumption is greater.

If the per capita consumption of wheat and corn had been as great during the last five years as during the first five years of the last decade, the average annual consumption would have been, of wheat, 91,579,568 bushels, and of corn, 330,221,216 bushels more than the quantity actually consumed. In other words, if the consuming capacity of the people of the country were as great as it was ten years ago, there would be a domestic market for 91,579,568 bushels of wheat and 330,221,216 bushels of corn more than the present average annual demand.

Thus, the decline in consuming capacity in the last ten years amounts to about one-fifth of the present average crops of both wheat and corn.



# GENERAL NOTES.

## Beet Sugar in the South.

In the article on "Beet Sugar" in the September number of the "Southern States" it was stated that there were seven beet-sugar factories in the United States—three in California, two in Nebraska, one in Utah and one in Virginia. Mr. O. K. Lapham, Staunton, Va., proprietor of the Virginia factory, the only one in the East, in answer to an inquiry from the "Southern States," writes us as follows:

"In reply to yours of the 23d instant, I beg to say our factory here burned over a year ago. Owing to the repeal of the bounty, and other unfavorable legislation, together with the general fall in prices incident to reduced supply of money, we have not deemed it safe to resume operations.

"Our experience was experimental in part, but entirely satisfactory so far as natural conditions and practice affect the industry in this section of the South.

"As to how it would be further South, we can only form an opinion from general causes. We believe wherever there is a cold enough climate to freeze the ground there beets can be grown suited for beet sugar.

"In this section the percentage of sucrose in the beets exceeded the average in Germany, France or other European countries where beets are grown extensively for sugar. They also exceeded those grown in any part of the United States, except in California.

"While the natural conditions exist in the South for making beet sugar, we would not advise anyone to enter upon the industry with the present unfavorable legislation. Foreign countries pay one-half to one and one-half cents per pound bounty on what sugar is exported. Under the reciprocity treaty with the Hawaiian Islands, sugar from that source comes into the United States free. Our present duty on foreign sugar (viz., 40 per cent., and one-

tenth cent additional against those countries which pay bounties to their sugar manufacturers) will not suffice to overcome other artificial advantages secured by foreign sugar producers, especially in silver countries.

"In California and Utah the sugar producers are protected by higher freights, being distant from the large refineries of the East.

"In Nebraska, a bounty paid by the State has built up the industry and still protects it, although no doubt many other States have more favorable conditions naturally than exists there.

"As to establishing the industry East and South, the cost of growing the beets and manufacturing them into beet sugar would be less in the South than any other section of the country, but lack of enterprise, capital and the co-operation between the farmers and manufacturers stands in the way of starting the industry.

"To succeed, the industry must be done on a large scale; a good supply of beets for at least three years guaranteed, at reasonable prices, equivalent to the farmer to \$1 per bushel for wheat, before a factory can be erected—say \$4.50 per ton for the beets. No other class would be benefited so much as the farmer by growing beets, not only from an assured return for his labor, but even more in the improvement of his land necessarily incident to the industry when pursued intelligently, as is done by European beet-growers.

"The yield per acre will run from five to twenty tons per acre, depending on the season, richness of soil and kind of cultivation given them. A yield on an average of twelve to thirteen tons per acre can be depended on, at a cost of \$20 to \$40 per acre, depending on conditions; this includes the delivery of the beets to the factory and fertilizer.

"The average cost we estimate at \$25 to \$30 per acre in the South when beets are

grown within five miles of the factory. The average income per acre, with an average yield of twelve and one-half tons per acre, at \$4 per ton, would be \$50 per acre, to which should be added, say, six tons of pulp, worth to the farmer \$2 per ton, or \$12 per acre, while the improvement of his land by deep tillage and thorough removal of weeds, enrichment of the ground, etc., is at least \$5 per acre more, making \$67 per acre income on an average, with an expenditure, say, of \$25 to \$30 on good ground. The rotation crop following the beet crop will show 50 per cent. more than on the same land not having been previously used for beets.

"These are facts proved by long experience in European countries and confirmed by our own experience under very unfavorable conditions. The beets grown here averaged 14 to 14½ per cent. of sucrose, which would give about 200 pounds of white granulated sugar from each long ton of beets, besides some molasses.

"We know of no industry more needed in the South than this to improve the land, while insuring a sure and profitable return to the farmer and incidentally benefiting all classes connected with it. We do not believe, however, it will be undertaken unless all classes unite in helping to establish the industry by paying a small bounty to the farmer in case he finds a loss after having performed the necessary conditions for success—say sufficient to cover half the loss, while he shall receive any gain incident. Farmers are not inclined to experiment or enter upon any new undertaking without some such guarantee on an industry which will benefit all classes.

"Before the manufacturer can enter upon the industry he must first secure a supply of beets for three years from responsible parties—say at least 2500 to 3000 acres each year to be put into beets, to be grown by the best methods. After three years the growers will then have seen the benefits from the crop, and they can be depended upon to supply the beets without any further guarantee. The industry will add to the value of lands within reach of the factory 50 to 100 per cent.

"In addition to farmers supplying beets, the factory should grow a limited quantity for a season or more as an object-lesson to others. The cost of a plant to handle such

a stock of beets will vary from \$150,000 to \$200,000, depending on circumstances. Refined white sugar should be turned out direct from the factory.

"Perhaps the one thing above all others which threatens the sugar industry, as well as all other producers, is the bounty of 100 per cent. received by manufacturers and producers residing in silver countries on whatever they export to us or other nations doing business on a gold basis. While this hangs over our heads, all producers of goods in this country which compete with silver countries will wait till more favorable conditions exist."

### From the Experiment Stations.

"Food Preservatives and Butter Increasers" is the title of Bulletin 118 of Cornell University Agricultural Experiment Station, Ithaca, N. Y. Bulletin No. 119, issued by the same station, deals with "The Texture of the Soil." The author of the last-named bulletin, Prof. L. H. Bailey, says in the introduction: "This bulletin and its successor are designed to inaugurate a new type of experiment-station publications. They are written for the purpose of giving their readers a few simple and primary lessons in some of the most fundamental subjects connected with the cropping of the land. It is hoped that they do not contain a single new fact. It is their sole ambition to teach, not to discover or to record."

Here are some extracts from the bulletin; statements of deductions made from examination of different kinds of soil:

"The texture or physical condition of the soil is nearly always more important than its mere richness in plant food.

"A finely-divided, mellow, friable soil is more productive than a hard and lumpy one of the same chemical composition, because it holds and retains more moisture; holds more air; presents greater surface to the roots; promotes nitrification; hastens the decomposition of the mineral elements; has less variable extremes of temperature; allows a better root-hold to the plant.

"In all of these ways and others the mellowness of the soil renders the plant food more available and affords a congenial and comfortable place in which the plant may grow. \* \* \*

"The reader will readily understand that it is useless to apply commercial fertilizers



to lands which are not in proper physical condition for the very best growth of crops. \* \* \*

"A chemical analysis of soil is only one of several means of determining the value of land, and in the general run of cases it is of very secondary value. \* \* \*

"The first step in the enrichment of unproductive land is to improve its physical condition by means of careful and thorough tillage by the addition of humus and perhaps by underdrainage. It must be put in such condition that plants can grow in it. After that, the addition of chemical fertilizers may pay by giving additional or redundant growth."

This bulletin is followed, in Bulletin No. 120, by an interesting and practical article on "The Moisture of the Soil and Its Conservation," in which the writer, Prof. L. A. Clinton, discusses the questions, "To what Extent Can the Amount of Soil Moisture Be Controlled?" and "Is it Possible to Do Anything to Save Crops from the Oft-recurring Droughts?"

The means by which moisture may be conserved are stated to be as follows: By plowing and tillage, mulches, underdrainage, lessening the influence of winds, applications of lime, salt, etc., rotation of crops to increase humus, adapting the crop to the soil.

Each of these methods is elaborately exploited, and the text is illustrated by a number of engravings.

Bulletin No. 44 of the West Virginia Agricultural Experiment Station, Morgantown, W. Va., is an extensive treatise on "Practical Entomology." It treats of "Insects Injurious to Farm and Garden Crops; the Character of the Injury; the Insect Causing it, and the Remedy." The bulletin is prepared, as stated in the introduction, "especially for the busy, practical farmer and gardener, who desire a work of reference containing readily accessible and plainly stated information upon some of the more important facts with reference to insect injuries to cultivated plants. It is also intended to be of service to the young student of economic entomology who desires a simple guide to the study of the common insects and the character of their work." The authors of the pamphlet are Profs. A. D. Hopkins, entomologist, and

W. E. Rumsey, assistant entomologist of the station.

Bulletin No. 26 of the South Carolina Agricultural Experiment Station, Clenson College, S. C., deals with "Founder in Horses" and other matters of interest to stock-growers. It is by Prof. W. E. A. Wyman, veterinary surgeon and a member of the station force.

### **The Pine Lands of the South.**

For many years the low, or, as they are generally described, bottom-lands of Louisiana have been noted for their fertility and special adaptability to the growing of sugar-cane. In Mississippi the same kind of lands produce large crops of cotton and corn. These, however, do not embrace nearly all the lands of the two States mentioned. Indeed, both Louisiana and Mississippi can boast of a large acreage of pine land, the soil of which, until within the past fifteen years, was not believed to possess any value for agricultural purposes. Unsatisfactory experiments with cotton and cane have often been made on these piney woods lands, and in nearly every instance the result has been such as to discourage their use, and after the marketable timber had been taken off the nominal value of the land was \$1 per acre. About the year 1880 a few enterprising natives in both of the States mentioned, assisted by Northern truck-growers, began to experiment at points along the line of the Illinois Central Railroad in the States of Mississippi and Louisiana; first with tomatoes at Crystal Springs, Miss., then with strawberries at Hammond, La. The result of these experiments was a surprise to everyone in the vicinity. The readiness with which the piney woods soil responded to the use of fertilizers, and the vigorous and healthy growth of the tomatoes and strawberries, was indeed a revelation even to those with large experience in truck farming. At the present time thousands of acres of pine lands between Jackson, Miss., and Hammond, La., were for sale at almost any price that might be offered. Since then, thrifty and enterprising Northern people have settled in these pine forests, and hundred and even thousands of carloads of early fruits and vegetables are now shipped from this territory to Chicago



and other Northern markets, and what in 1880 was considered barren pine wastes are now converted into great gardens. The profitableness of truck farming on these pine lands will be better understood after reading the following statements made by farmers of Roseland, La.:

Mr. C. M. Pullam says that from eighteen acres of radishes his gross returns was \$1324.50, net \$802.66. Mr. D. M. Rodgers, formerly of Mantorville, Minn., says that from nine and three-quarters acres of radishes, cucumbers and sweet potatoes he netted \$616.71. Mr. J. D. Cunningham's gross return from eighteen acres of strawberries, one acre of radishes and one-sixteenth acre of onions was \$2593.69, net \$1690.57. Mr. A. B. Campbell, formerly of South Dakota, netted \$1457.14 from eight acres of vegetables. Mr. H. E. Hostetter, formerly of Hanover, Pa., netted \$825 from sixteen acres, and will produce another crop during the season.

It would be possible to multiply indefinitely statements of this character from responsible gentlemen located at different points in Mississippi and Louisiana. In fact, the entire country on the line of the Illinois Central Railroad south of Jackson, Miss., is especially adapted to the growing of fruits and vegetables for the early Northern markets. And this company, appreciating the advantages of soil and climate and the quality of the fruit and vegetables grown in this locality, has been quick to furnish fast service and the most modern improved refrigerator cars for the handling of these perishable products.

Let no one speak slightly of the poor pine lands, for they are already furnishing our tables with the choicest fruits and vegetables nearly every month of the year, and are, indeed, the most profitable lands in the South.

### **Truck Farming in the South.**

The New York Times recently published an interesting article on this subject, from which we take the following. The facts brought out have been set forth and elaborated from time to time in the "Southern States," but the article is well worth reproducing in part here for the reason that the statements it contains will bear continued and emphatic reiteration, and because it is

a presentation of the subject from a Northern point of view:

"The Southern coast, from the Chesapeake to the mouth of the Rio Grande, has become within the last few years one vast truck garden. The old cotton and rice 'plantations' of South Carolina, Georgia, Florida and the Gulf States have been cut up into vegetable gardens. In North Carolina and Virginia vegetables have, in many places, taken the place of tobacco as a farm product. Even in the interior, wherever shipping facilities are reliable and cheap, the vegetable farm is seen supplanting corn and cotton fields.

"Along the coast there are great centres of the truck business. On the Gulf coast there are New Orleans, Galveston, Mobile, Pensacola and Tampa, and on the Atlantic there are Sanford, Jacksonville, Savannah, Charleston, Wilmington and Norfolk. From these different centres some kind of vegetables are shipped to the North, East and West every day in the year. A few years ago the vegetable season was well defined. The New Yorker could tell just when tomatoes or cucumbers or asparagus would be available for his home table. Now these vegetables are shipped from Florida in the dead of winter. As spring advances up the coast, while yet the Northern and Eastern States are wrapped in ice and snow, these vegetable dainties are poured in the great cities of the North from Jacksonville, then from Savannah, then from Charleston, then from Wilmington, and then from Norfolk. By this time the gardens of Delaware and New Jersey are beginning their early spring shipments; so that a New Yorker may commence eating asparagus, say, in January, and continue until July, by which time his palate craves other delicacies.

"Owing to the profits made by such of the earlier tuck-growers as Major Ryals and Mr. Schley at Savannah, Ga., and the French gardeners around Charleston, S. C., there was a very rapid development of truck gardening. As is usual in such cases, the business was soon crowded. Vegetables became too cheap for large profits. Intensified gardening was resorted to for the purpose of lowering the costs of production and to raise the standard of the product. Under the present system the



gardens around Savannah, Charleston and Norfolk are in almost as high a state of fertility and productiveness as the famous gardens of Paris and the Isle of Guernsey.

"Many kinds of vegetables have also been almost abandoned by the most successful gardeners, who have reduced the list of their products down to such vegetables as find ready and profitable sale.

"To one who has not visited the Southern coast, the great variety and abundance of the vegetable crops can hardly be appreciated. Take a bit of this coast, for example, between Savannah and Charleston, and it will be found that almost every vegetable known to man is produced and shipped to the North and East. The crop is shipped by water because of cheap rates of freight. Savannah sends shiploads weekly to New York and Philadelphia. Other shiploads are sent weekly from Charleston. The vegetables are brought into these two cities from the adjoining coast. Small steamers and smaller sailing craft go up and down among the inlets and channels of the coast and bring in loads of cabbages, tomatoes, cucumbers, beans, squashes, beets, potatoes, peas and asparagus, as well as berries of all kinds, which are then loaded into New York steamers and shipped to the markets of the North. All of them are handled as delicately and tenderly as babies. Some are put up with great care and with considerable artistic effect. It may make a difference between a good profit and a heavy loss if the vegetables are packed neatly or carelessly. It is not so much a matter of getting them into market in good condition as it is to get them before the purchaser in an attractive appearance.

"Shortly after the war a French gardener named Goblet came to Charleston and began raising truck. He made money. He was the first to try asparagus, getting his plants from France. He met with wonderful success. He brought from France two skilled gardeners named Jounnette, who succeeded him in the vegetable business, and have enlarged the gardens left by Goblet. These Jounnette brothers now own the largest asparagus garden in the world, 250 acres, devoted entirely to the culture of this one vegetable. As the profits on asparagus have been, and probably will be for

some years, quite satisfactory, they have made fortunes.

"The planting of asparagus is not only the most profitable, but it is also the most interesting, of the truck crops. The seed is planted one winter and the roots are set out the following year. The third year the 'sprouts,' or 'grass,' as the growers call it, can be cut for marketing. The roots are put in the bottom of a trench twelve to eighteen inches deep. As they grow the earth is drawn about them until the trench is made a bed, or ridge, ten or fourteen inches high. The sprouts grow rapidly with the first warm weather. They come out in a single night. If frost is threatened a double plow is run on top of the bed and a thin layer of earth is thrown over the tender sprouts. This protects them for a night, and they push their heads through the earth by the following day.

"These sprouts are cut every morning. A knife made especially for the purpose is used to cut or rather snap off the sprouts at their juncture with the root. The laborers pick up the sprouts, which are selected, carefully clipped at the heavy ends to make them even, put into neat packages, tied up with ribbon and shipped.

"The first year an acre will yield about \$50 to \$75 of sprouts. This yield increases until the third year, when a yield of \$150 to \$300 an acre is obtained. The crop is then certain for eight years. After that the roots get too near the surface, and the field is plowed up and replanted.

"It has been thought that the seed deteriorates in this country and a new supply is frequently brought from France. This is to be doubted, however, and a number of planters are using native seed with excellent results.

"The profits in asparagus now overshadow those of all other vegetable crops, because it has not yet become a glut on the market. It is hardly probable that it will soon cease to be a paying crop, as it demands a certain kind of climate and specially adapted soil. Besides these considerations, when once planted it is sure of yielding a steadily-increasing crop for several years, and an abundant product for from six to ten years. Larger profits have been made in exceptional years from other crops. A few years ago a truck-grower



near Charleston cleared \$11,000 in one year from ten acres in cabbages.

"The truck business has been of vast benefit to the South. It has made valuable millions of acres, and has enabled hundreds of families along the coast to recover fortunes lost during the war. It has become a new industry and a source of revenue to the Southern people that can hardly be estimated in its great volume."

### **Cotton Prices.**

The Little Rock Gazette, speaking of those farmers who still give their whole attention to the raising of cotton and buy their food supplies, says:

"They have nothing to say as to what they shall receive for their year's labor, and they never will have until they learn how to make their living on their farms and to regard the cotton they raise solely as a surplus crop, to be sold whenever some one offers the price that suits them.

"They buy their foodstuffs in Kansas City and St. Louis, and their crops are mortgaged to pay for what they have eaten while engaged in making their cotton crops. Instead of raising their own meat and growing their own corn, they have had others to do it for them, and they must sell their cotton to pay for these supplies, otherwise they will not be able to obtain credit next year with which to obtain provisions to enable them to make another crop of cotton. The men in Liverpool thoroughly understand the situation in the South. They tell the Southern planter exactly how much cotton he is going to make and how much it will be worth in September, October, November, and so on. If the Agricultural Department at Washington issues a statement announcing that the crops will be a couple of million bales short, the Liverpool speculators at once inform the world that they do not believe the reports received by the department at Washington, and this simple announcement has the effect of preventing an increase in the price of cotton.

"There are several planters in Arkansas who insist on having a voice in placing an estimate upon the value of the products of their farms. To some of them their cotton is worth more to them than it is to the Liverpool sharks who are continually try-

ing to hammer down the prices of Southern cotton. They believe that when the English desire to trade with them they are entitled to have something to say before the bargain is closed. Mr. John Witt, of Columbia county, perhaps the largest planter in the county, is a conspicuous member of this class. He is a gentleman who knows how to farm. Our correspondent at Magnolia tells us that he has 400 bales of cotton on his farm, and that this cotton has been accumulating for three years. Mr. Witt has made up his mind not to sell a single bale of this fleecy accumulation until those who control the cotton market make it profitable for some one to pay him ten cents a pound for it. He has also wagered a friend at Magnolia that the staple will be worth by the 1st of January the figure at which he holds his stock."

### **Three New Farmers' Bulletins.**

"Facts About Milk," by R. A. Pearson, B. S., assistant chief of the dairy division, Bureau of Animal Industry, U. S. Department of Agriculture (Farmers' Bulletin No. 42), treats of the composition, changes, and care of milk, the means of preventing and detecting impurities, and proper methods of handling milk for town and city supply. The illustrations consist of eight cuts—the different grades of milk; proportions of the component parts; a dairy thermometer; creamometer; lactometer; pasteurizing apparatus; glassware for Babcock fat test; milk jar for distributing milk to families.

Certain improvements in the prevailing methods of handling and the present principles of purchasing milk are suggested, among which is the grading and pricing of milk by the percentage of fat it contains, and the labeling of each can with the percentage of fat guaranteed to each grade.

"Sewage Disposal on the Farm and the Protection of Drinking Water" (Farmers' Bulletin No. 43, U. S. Department of Agriculture), by Theobald Smith, M. D., professor in Howard University, pathologist to the Massachusetts State Board of Health, etc., discusses the disposal of night soil, liquid sewage, kitchen and chamber slops, and waste and garbage; all this with special reference to the danger of contaminating drinking water and the ways and proper methods of constructing wells to prevent



the seeping of surface drainage into them. The construction of the privy, cesspool, dry-earth closet, and vaults, and the advantage of irrigating some nearby meadow with their contents, are discussed. The text is illustrated with eight cuts, showing shallow barnyard well, portable earth closet, earth closet and dry catch, self-acting peat-dust closet, settling chamber and flush tank for irrigation, subsurface irrigation, and garbage cremator.

"Commercial Fertilizers: Composition and Use" (Farmers' Bulletin No. 44, U. S. Department of Agriculture), by Edward B. Voorhees, M. A., director of the New Jersey experiment stations and professor of agriculture in Rutgers' College. This paper discusses the need of commercial fertilizers; the requirements of different soils and crops; the difference between commercial and agricultural value of fertilizers; forms, sources and composition of fertilizing materials, and the variations in the compositions of manufactured fertilizers; and methods and conditions controlling the profitable purchase and use of fertilizers. The summary is followed by a tabular statement of the "composition of the principal commercial fertilizing materials."

These bulletins are designed to meet a popular demand for the information of which they treat. They are issued under a special appropriation, and two-thirds of the copies printed are for distribution by members of Congress. The remaining third is held for free distribution upon application to the Secretary of Agriculture, Washington, D. C.

### **Ostrich Farming in Florida.**

The Florida Agriculturist prints the following entertaining description of the ostrich-raising experiment that is being made in Florida, of which mention has been made in the "Southern States:"

"Perhaps the most interesting experiment attempted in Florida at present, and certainly the most novel, is the ostrich farm at Merritt's Island, owned by Major A. J. Tiffin. The entrance to Roselawn is very beautiful. A long, straight avenue of shell lined on either side with giant stalks of bamboo, whose feathery foliage interlaces overhead, extends through the hammock at the river's edge to Major Tiffin's house.

At the end of this avenue we get our first view of the ostriches. They are confined on several acres of ground, and it is an odd sight to see the great birds roaming about, quite at home in their tropical setting, for one more naturally associates them with the contracted quarters of the zoo.

"Although somewhat the worse for wear on their arrival at Roselawn from the long trip across the continent, broken only by their stay at Atlanta, the birds recovered rapidly, and are now in fine condition. Their ranks have been reinforced by some baby ostrich chicks, and Major Tiffin believes that the experimental stage is largely past.

"The ground on which the ostriches are confined is enclosed by a fence ten feet high, made of posts set sixteen feet apart, with several wires stretched laterally. The same sort of fence divides the enclosure into eight triangular runs, with a central circular shed, affording shelter for all, yet giving each pair of birds separate territory.

"Each ostrich receives a pound of grain daily in addition to green stuff, gravel, ground shell and bone. They all have access to running sulphur water, and to its effects Major Tiffin ascribes much of their fine, healthy appearance; but the ostrich is not subject to disease, living to a very green old age, as a rule.

"Mr. Atherton, in a valuable book on ostriches, speaks of a disease of the eye as being the only ill that the bird is heir to, and gives a simple formula for curing it. In Africa, a disease called 'yellow liver' has appeared of late years among ostrich 'chicks' in some localities, others being entirely free from it. It is thought to result from certain foods eaten by the parent bird.

"The very best food plants for ostriches in Africa are the 'karron,' 'fei-bosch' and 'brack-bosch.' From their descriptions it seems possible that we have in some parts of the State plants closely resembling at least two of these. Prickly pear is a valuable food, but is used mainly for the young birds. The labor of burning off the thorns and chopping it is so considerable that it is resorted to only when other food is scarce for the more rapacious digestion of the old ostriches.

"Young ostriches are designated as 'chicks' until they attain the age of seven



or eight months. The egg from which they come weighs three pounds, so that it is not surprising that even at a tender age they are very large-sized chicks. An ostrich 'chick' is very pretty. It has no feathers, but a soft, downy covering that, except for the shaggy roughness on its back, reminds one, both in color and marking, of a diminutive tiger skin.

"It is the custom to take the chicks from the parent bird when they are only three days old. In Africa they are herded by boys, who find fresh pastures and prepare large quantities of chopped prickly pears for their young charges. Major Tiffin pursues the same plan with his chicks, although just now the young birds are luxuriating on the remnants of last year's crop of celery. The little creatures are also fond of cabbage; they get no grain at all.

"The chicks are brooded on a larger scale in precisely the same manner as ordinary chickens. At Roselawn they share a portion of the incubator-room. Doubtless the same rules of cleanliness and eternal vigilance that apply to chicken-raising are required for their successful rearing.

"Artificial incubators is the problem next to be considered. The hen ostrich lays every other day, and if for each egg laid one is taken from the nest she will continue laying until twenty or thirty eggs are produced. If no eggs are taken away, the hen leaves off laying as soon as she has fifteen or eighteen eggs, the greatest number that she can satisfactorily cover. Hence, if it were not for artificial incubators a large per cent. of the profit from each bird would be lost every year.

"In South Africa, where ostrich farming assumes such large proportions, regular ostrich incubators are used. These are very expensive, costing \$300. In this country ordinary chicken incubators are used with good success.

"Of the eggs entrusted to an incubator at Roselawn this year the hatch was disappointing. This failure Major Tiffin ascribes to the fact that the eggs had been kept too long previously to setting. Major Tiffin will visit Southern California the coming autumn to study the methods of incubation employed at the ostrich farm in Orange county, and he intends to spare no expense in equipping Roselawn with every

advantage for successfully rearing the young birds.

"A very creditable characteristic of the male ostrich is the fact of his sharing equally with the hen the long period of sitting. While the hen sits through the day, the cock faithfully takes his place on the nest at sundown, and sits through the night. His dark, glossy plumage is less conspicuous than that of the light-colored hen, and his superior strength and courage make him a better defender of the nest at night.

"The ostrich, like the quail, once having chosen his mate, is very constant to her. Not fully appreciating the strength of this instinct, Major Tiffin, in changing the birds to their larger range, separated a pair of these Darbys and Joans. The irate husband drove the new wife against the wires inclosing their domicile, inflicting such injuries upon the poor creature's neck that she died from the effects. As the old bird, quite without remorse, refused to be comforted for the loss of his first wife, Major Tiffin recently sold him for \$200 to a Providence poultry dealer, who wished to put him in his show window as a sample of the size of his broilers.

"The ostrich attains maturity at five years. The plumage of the female is a soft, smoke color, while the male has a coat of glossy black. The wings and tails of both birds are tipped with beautiful white plumes. The cock is by far the finer looking of the two, especially during the breeding season, when his bill and the scales on his forelegs change to an exquisite rose color, giving him a strikingly handsome appearance. The external superiority of the male bird is balanced by the beautiful and amicable disposition of the female ostrich as compared with the former's turbulent spirit.

"The ostrich can with one kick kill anything that comes to it, but it is able to kick forward only, and at the side or rear of the bird one is comparatively safe. In spite of its deadly kick, the leg of an ostrich is strangely fragile, and the worst and most frequent sources of loss to the owner of an ostrich farm are broken legs. Any bird that breaks a leg must be killed, as there is no surgical operation by which the bone, brittle as porcelain, once broken, can be put together again. The poor consolation left



the owner in such a case is a soup made from the thigh, the only edible part of the bird. This, it is said, closely resembles chicken, though having a finer flavor.

"Something of the extent of ostrich farming can be realized from the fact that \$10,000,000 worth of ostrich feathers are sold at auction every year in London. Buyers go from all over Europe to these sales.

"Feathers bring from \$4 to \$35 per pound, one bird averaging about \$40 worth of feathers a year. Fourteen years ago, when ostrich farming was in its infancy, it was not unusual for the feathers from one bird to bring \$250. At that time great numbers of ostriches were slain by natives for the yearly crop of feathers, and a pair of birds that would today sell for from \$200 to \$300 brought \$500 to \$800. The birds are plucked once every year. This process at Roselawn does not entail the immense labor or amount of preparation that is required on a large ostrich farm. A stocking from which the foot has been cut is slipped over the ostrich's head, and once blinded the bird is quite easily managed. Feathers are cut and not plucked, as if they were allowed to remain until the quill is fully ripe they lose much of their beauty, while too early plucking injures the future yield. The feathers find a ready market in New York. A fine white plume that is taken from the bird is about eighteen inches long and as symmetrical as some graceful fern.

"An ostrich egg admits of beautiful carving, almost like ivory. Major Tiffin has sent forty eggs to New York to Tiffany's, to be made up with silver for all of the uses to which, since the famous drinking cup in which Cleopatra dissolved the pearl for Marc Antony, the ostrich egg has been put. These articles will be placed on sale in the South next winter.

"Major Tiffin believes that the ostrich is perfectly adapted to Florida, and that placed in our orange groves they would supply a large portion of the fertilizer which must be applied to the trees each year. As the ostrich does not eat leaves, it would in no way injure the trees. These characteristics, together with the hardness of their constitution, their capacity to withstand drought, and their cheerful ability to subsist upon ten-penny nails in an emer-

gency, should make them valuable to the Florida fruit-growers.

"Major Tiffin intends, as soon as he has large numbers of young birds to dispose of, to sell them far below the market price, which is \$25 at three months, and in this way to place them within the reach of all.

"So we may reasonably hope at no far distant day to have these great creatures stalking about our premises, to call the ostrich instead of the dog to repel the invading tramp, and to furnish the Northern tourist with another souvenir of Florida—an ostrich plume."

### **Truck Farming in the Gulf States.**

Louisiana can supply the Northwest with early cucumbers, but if they are not produced early and sent to market before the States north of us send in their supply ours will hardly pay their long-distance express charges. Again, in the matter of Irish potatoes Louisiana can frequently supply them in March, always in April, and ordinarily not in much quantity until May, by which time the West is full of new potatoes and ours will not pay the cost of transportation. Cabbages, onions and garlic are standard truck crops in Louisiana, and yet prices for them vary from season to season, and sometimes from day to day, in a way that brings despair to the producer. The loss on a given crop one season lessens the production the next season, when prices may be doubled or trebled because of the scarcity. While specialties in truck farming are doubtless advantageous in developing skill and economy in the particular line engaged in it, still it seems injudicious for the truck farmer to put all of his eggs in one basket, all of his work into one crop. There comes to the truck farmer, as well as to the general farmer, an insurance against disaster if he divides his work among several favorite crops, one or two of which failing, the rest may pay him fairly for the work done on all. The insurance may cost something in the reduced effectiveness that comes from labor so diffused and scattered rather than concentrated upon a favorite specialty, but such insurance seems essential if we are to build up permanently our truck farming industry. Truck farming cannot be carried on in the easy-going method that attaches to

our great staple crops of cotton, corn, sugar-cane and rice. Potatoes that may be worth \$5 per barrel the first week in April may drop to \$1 per barrel the first week in May. Such changes do not occur in sugar or in cotton. They do occur to some extent in rice, in which a glutted market brings strange depressions, considering that it is not a so-called perishable product. If truck farming in the Gulf States be reduced to a rigorous system, such as shall avail of the earliest dates for marketing produce, the neatest and best styles of packing, quick transportation and honest commission men, it will unquestionably be profitable and drive Bermuda produce from the field, which is fairly and properly ours. Let us learn to do all this. We have the soil and climate, and all we need now is to "know how."—The Protector, Plaquemines, La.

#### **"Protection of Drinking Water on the Farm."**

The following paragraphs are from Farmers' Bulletin No. 43 of the U. S. Department of Agriculture, on "Sewage Disposal on the Farm and the Protection of Drinking Water:"

"The next subject to claim our attention is the protection of the sources of drinking water. In the country water is, as a rule, obtained from wells and springs. The important bearing upon well water of soil purity demands a few explanatory remarks concerning the origin of well water. Wells are excavations made into the ground to a variable depth until water is reached. This water is denominated ground or subsoil water. Its origin may be better understood if, for the moment, we conceive the surface of the earth as more or less irregular and entirely impervious to water. The rain would collect on this surface and form lakes, ponds and streams, according to the configuration of the surface. If, now, we conceive this surface covered with sand or other porous earth to a greater or lesser height, and the top of this be considered the earth's actual surface, the water will remain in the same position, but it will be buried within and fill the pores of the overlying soil as subterranean lakes, ponds and streams. In digging a well we remove this porous layer of earth until we reach these

subterranean streams or reservoirs of ground water. If the above description be thoroughly understood, the condition under which well water may be obtained at different depths will become intelligible, and it will also appear plain why ground water may flow as any surface stream and pick up on its way various substances which have percolated into the ground.

"When the bed of porous soil overlying the impervious layers is very deep, wells will have to be dug down to a considerable depth to reach the surface of the ground water. Where this layer of pervious earth is of slight thickness, wells will be shallow, and the ground water may appear on the bottom of gullies, trenches and wherever the porous layer has been dug or washed away.

"The movement of the ground water depends on the inclination or slope of the impervious strata, and has been observed to be quite rapid in some instances. By adding common salt to the water in a well its detection in other wells at a short distance has been found a guide in the determination of the rapidity and direction of the underground current.

"When the ground water resting on the uppermost impervious layers is near the surface, and therefore not safe or fit to use as drinking water, it may be possible by digging below this layer to find another porous bed containing water. This source will, in general, be much purer since it is less exposed to pollution from above, and since the water has to travel longer distances underground. Such a deep supply must, however, be protected from the superficial supply by a water-tight wall extending to the surface of the deep supply, otherwise the water from the upper layers will simply drain into the well.

"Wells are exposed to contamination in two ways. The surface water from rain, house slops and barnyard drainage may find its way into the well at or near the surface of the ground. Or the ground-water streams supplying the well with water may in its subterranean movements encounter cesspools or seepings from cesspools, and carry with it soluble and suspended particles some of which may enter the well. There can be no doubt that a large percentage of the wells are exposed to contamination



with refuse matter in the manner described, and it now remains to gauge the danger to health and life which may be carried in the contaminating substance. The danger of typhoid fever bacteria entering the water has already been mentioned. These may be washed in from the surface, or they may pass from cesspools near by through fissures in the ground, passages dug by rats, etc. Whether such bacteria can pass through the pores of a compact, unbroken soil from a cesspool to a well near it is a matter not fully settled. Since, however, the actual condition of the deeper layers of the soil between cesspool and well cannot be known, it becomes imperative to prevent all pollution of the ground-water current supplying wells by either abolishing the cesspools or else placing them at a considerable distance from all sources of water.

"Besides typhoid-fever bacteria, those organisms which cause digestive disturbances, and severer troubles, such as diarrhoea, dysentery, and possibly other unknown diseases, may be carried into well water. During cholera epidemics, polluted wells might form centres of infection. Eggs of animal parasites may be washed in from the surface. Again, the barnyard manure, representing the mixed excrement of various animals, may, under certain conditions, be bearers of disease germs, and such excrement should, under no conditions, be looked upon as entirely harmless to human beings.\*

"Besides the protection of the ground water near the well from pollution emanating from cesspools, etc., the surface of the ground about the well should be kept free from manure, slops and other waste water; hence the well should not be dug under or close by the house, nor should it be located in the barnyard, where the ground is usually saturated with manure. It should be surrounded by turf, and not by richly-manured, cultivated or irrigated soil. The ground immediately around it should slope gently away from it and be paved if possible. The waste water from the well should not be allowed to soak into the ground, but should be collected in water-tight receptacles, or else conducted at least twenty-five feet away

in open or closed channels which are water-tight.

"The well itself must be so constructed that impurities cannot get into it from above or from the sides. If water can soak into it after passing through a few feet of soil only, it cannot be regarded as secure from pollution. To prevent this, the well may be provided with a water-tight wall built of hard-burned brick and cement down to the water level. The outside surface of this wall should be covered with a thin layer of cement, and clay pounded and puddled in around it. Or, tile may be used to line the well and the joints made water-tight with cement down to the water level. Driven wells, i. e., wells constructed of iron tubing driven into the ground, are perhaps the safest where the quantity of water needed is not large, and where other conditions are favorable.

"These different devices are all designed to keep water near the surface of the soil from percolating into the well. To keep impurities from entering the well directly from the top considerable care is necessary. Such impurities are likely to prove the most dangerous, because there is no earth filter to hold them back and destroy them before they can reach the water. Adequate protection above may be provided in several ways. The sides of the tiled wells should project above the surface, and be securely covered with a water-tight lid. The ordinary well should also have its sides project above the surface and a water-tight cover of heavy planks provided, which should not be disturbed excepting for repairing or cleansing the well. Under no circumstances should objects be let down into the well to cool. A still better method of protecting the water from above is to have the lining wall of the well end three feet below the surface of the ground, and to be topped there with a vaulted roof, closed in the centre with a removable iron or stone plate. The top should be covered with twelve inches of clay or loam; above this there should be a layer of sand, and lastly a pavement sloping away in all directions.

"Too much care cannot be bestowed upon the household well. It should be guarded jealously, and all means applied to put the water above any suspicion of being im-

\*It is probable that the filth which gets into cows' milk, and which appears to be mainly excrement of cows, is largely responsible for the severe summer diseases of infants fed on cows' milk.

pure. This is especially true in dairies where well water is used in cleaning the milk cans, and where steam and boiling water have not yet found their way for this end. Polluted wells in such houses not only endanger the health of the inmates, but that of a more or less numerous body of city customers.

"In those regions where rain water is the only safe drinking water, the same care is necessary to protect the stored supply from contamination, and no suggestions beyond those already given are necessary here."

The Watkins Co., which has been operating a railroad and large immigration and colonization undertakings in Southwest Louisiana, with St. Charles, La., its headquarters, has gone into the hands of a receiver.

### **Business Methods in Farming.**

Prof. H. H. Williams, of the University of North Carolina, in a letter giving a very interesting account of a recent trip through North Carolina and adjacent States, tells of what he saw on one farm as an illustration of what business-like farming is capable of. He says:

"The farm is near Salisbury, in Rowan county. The owner is Mr. J. W. Harrison, of Mill Bridge, N. C.

"The farm is not large—325 acres under tillage. When bought by Mr. Harrison several years ago it was 'worn out.' And he began the work with little capital, save his willing hands and active head.

"Last year the gross sales from the farm were \$4100. The expenses were \$1900. The crops are corn, peas, wheat and clover.

"Four hundred tons of corn ensilage were gathered from seventeen acres; 4000 bushels of corn from 100 acres, and 900 bushels of wheat were raised.

"Twelve hundred dollars' worth of cattle were sold, \$1400 worth of butter and \$300 worth of pork.

"Anybody will see that here is good farming. And, of course, Mr. Harrison has a bank account. He has a son in the senior class at Davidson, and one feels the air of ease and prosperity before entering the house. Here is a farmer making money, and ready to talk farming all day. In fact, the feeling of Mr. Harrison for his

farm was like that of a man for his brave and faithful horse bringing him in safety out of great danger. And I was not surprised to see that his boys were fond of the farm, and expected to be farmers. Here is a real success. How was it achieved? Mr. Harrison has the following simple principles:

"First, he keeps an accurate account of everything.

"Second, he never asks of his land the same crop two years in succession.

"Third, he feeds the product of his farm to stock.

"Fourth, the manure from this stock is carefully gathered each day and put under shelter.

"Fifth, he studies his farm, and reads all the best agricultural papers.

"Mr. Harrison believes in the Jersey cow. He has a grand herd—nearly all bred by himself. He has a clear idea of what a cow should do at the pail and how she should look.

"The money is in breeding good stock, he says. But, of course, a man must know what a good animal is. It is no trouble at all to waste money in stock.

"Mr. Harrison likes a French coach stallion and a small Yorkshire hog. He has fine specimens of each.

"Now, I have given the facts as I saw them. Do you see the lesson? It is this: Put the same business methods into the farm that you do into any other business, and you will succeed. Don't buy your manure at a store; make it with cows. Don't ask the same thing of your farm all the time. Study the markets and use the railway. There is life in the old farm yet! It has relief for the tired brain; it has food for the exhausted nerves; it has the fresh air, the quiet hours, the calm, restful nights that will heal our feverish city life."

The September number of the *Southern Field* contains a great deal of information such as is needed by those persons in the North and West who are looking to the South as a possible future home, and who want to know something about the comparative advantages of different parts of the South. The *Southern Field* is published by M. V. Richards, land and industrial agent of the Southern Railway, Wash-



ington, D. C. Its successive issues constitute an elaborate and extensive exposition of the varied resources of the territory reached by the lines of the Southern Railway.

Messrs. John L. Williams & Sons, bankers, of Richmond, Va., have published a chart which shows the history of silver and silver coinage in the United States from 1757, the date of the establishment of the United States mint, to 1896. It contains besides, much other interesting statistical information concerning gold and silver.

## NEWSPAPER COMMENT.

### Not all Cotton Slaves.

We are at a loss to understand why Wallace P. Reed should have it in his heart to write an article calculated to do the South great injury. He must have been in a pessimistic fit of the blues when he wrote his recent article to the *New York Independent* in which he declared Southern farmers have no market for anything else but cotton; that they are slaves, and any man who comes from the North and invests in a farm in the South soon loses all he has and becomes a slave like the rest—or words to that effect. We hope when Brother Reed is in a case of dumps and looking only on the dark side of things, that he will refrain from sending contributions to the *Northern press*.

There is just that element of truth in his letter which is calculated to do harm. It is true that for many years Southern farmers were slaves to cotton-planting. But is also true that each year finds more hog and hominy produced on the Southern farms, and the cotton crop becoming more and more a money crop instead of a merciless master. It is not true that Northern farmers who settle in the South are doomed to failure, nor is it true that those who have made the experiment have failed. The city of Augusta is surrounded by thrifty farmers who have come here from other States and from Europe, and who are doing well, and growing in prosperity. There are Georgia and Carolina farmers in Augusta's territory who are native to the soil, who are doing well; and wherever farmers in the South have diversified their crops, and made the

farm self-supporting, prosperity has resulted.

That Georgia is coming into prominence as a fruit-growing State must be known to Mr. Reed, and the success of the Ohio fruit-growers, and all of those thrifty, progressive fruit-growers in the cotton belt of Georgia, is a matter of yearly boast that could hardly have escaped the attention of a wide-awake newspaper man like Mr. Wallace Reed. Millions of trees are bearing fruit in Georgia, and more are being planted, and where farmers fail in the South it is not to be charged to conditions of climate and soil.

In a subsequent number of the *Independent* Mr. W. H. Edmonds, of the "Southern States" magazine, has replied to Mr. Reed and furnished some convincing statistics going to show that the Southern farmers are raising something else besides cotton.—*The Chronicle*, Augusta, Ga.

### The Northern Farmer in the South.

"Within the past year or two, says Mr. Reed, numerous efforts have been made to establish colonies of Northern and Western people in various Southern States. It is too early to predict the final outcome of these experiments, but it is safe to say that many of the colonists will be bitterly disappointed."

The sufficient comment on this, it appears to us, is that if it is "too early to predict the final outcome of these experiments," Mr. Reed should have waited a while before making his prediction. The present "outcome" of the experiments is enough for present consideration, and as the success of the most notable experiments, including those at Tifton and Cycloneta and Fitzgerald and other places in Southwest Georgia, at a score of places in Florida, in Southern Louisiana and Texas, at Southern Pines and other places in North Carolina, appears to have been wholly satisfactory to the experimenters, no one else has any reason to complain of them. The first few colonists at these places have been followed by thousands, who have been influenced solely by the representations of the pioneers, and large additions are being made to their numbers yearly. It is to be presumed that these settlers have found better conditions in their



new homes than in the homes they left behind them.

Mr. Reed draws an especially dark picture of the state of the farmer who "is forced by necessity to make cotton his leading crop," and who is "always in debt" and working on credit, being "bound to plant a certain number of acres in cotton," and with a mortgage on the "crop" for advanced supplies. "Year after year," he says, "and from one generation to another, the Southern farmer goes on in this way, never getting out of debt, never freeing himself from the merchant who holds him in bondage." The description of the condition of the "cotton-tot"—the farmer who tries to make a living by growing cotton "on credit" and making nothing else, is not much overdrawn. Few farmers, we believe, get rich in that way. No intelligent and progressive farmer undertakes to farm in that way.

Mr. Reed's mistake lies in assuming that intelligent and progressive Northern and Western farmers who come South to better their conditions must or will adopt the worst methods they find in practice here. His argument, as is seen, does not credit the immigrant with the possession of even ordinary intelligence, and its value may be estimated accordingly. In conclusion Mr. Reed says:

"There is not an instance on record of a Northern farmer who has prospered to any great extent in the South since the war. A few have been moderately successful, but nine out of ten in a few years get disheartened and fall into the ways of their neighbors. The farmer from New England or the Northwest, who settles in the cotton belt on an average farm, with cash enough to run him for the first year, will probably find himself in debt at the end of ten years, and, worse than all, he will be some country merchant's slave, doomed to toil without hope of reward for the remainder of his life.

"Perhaps some reader will protest against these statements, and point to the newspaper accounts of the prosperous condition of some Northern farmers who have settled in the South. When they look into the matter they will place no confidence in newspaper stories of a Southern Eden, where life is a pleasant dream, and where

fortunes are made almost without an effort. It is better for the South and for the outside world to let the truth come out. Settlers from the North and West can find pleasant homes and make a good living on farms in the Piedmont region and along the edges of the cotton belt, but if they plunge into the interior of the distinctively cotton territory they will be lucky, indeed, if they save enough out of the wreck to carry them back to their old homes."

The sensible Northern or Western farmer, we take it, will place no confidence in newspaper stories of an Eden anywhere in this country, "where life is a pleasant dream and fortunes are made without work." All that we can truthfully claim is that life is a pleasanter dream here than in regions which are colder in winter and hotter in summer, and that fortunes can be made here on the farm particularly with less hard work than they can be made where the land costs more to buy or to rent, and to work, where the crops are less varied, and stock and cattle have to be sheltered and fed for several months in the year, and where, in short, all the conditions of farming life are less favorable and the rewards of agriculture are less sure and generous.

The only question for the intending emigrant from a Northern or Western State to decide for himself is the comparative advantages of the region he leaves and the region he seeks, and if he be an educated and intelligent man he can readily inform himself on this question from the experience and observations and reports of his neighbors, who have preceded him. Mr. Reed's assertion that "there is not an instance on record of a Northern farmer who has prospered to any great extent in the South since the war" is happily one of fact and not of opinion, and can therefore be easily disposed of. Any Northern or Western farmer who desires to have the record of innumerable such instances for his instruction can obtain it by reference to the reports published monthly in the "Southern States" magazine, of Baltimore, and in the published reports of the proceedings of the "Convention of Northern Settlers in the South," which was held at Southern Pines, in North Carolina, a few weeks ago. They are conclusive on the point to which they



relate, and afford the only "answer" that is necessary to be made to any part or all of Mr. Reed's ill-advised essay.—News and Courier, Charleston, S. C.

### **The Southern Farmer.**

Wallace P. Reed, a well-known, but visionary newspaper writer, recently contributed a remarkable article to the columns of the New York Independent, under the title "King Cotton's Slaves."

Mr. William H. Edmonds, of the "Southern States" magazine, Baltimore, has answered the article through the Independent in a very able and thorough manner. \* \* \* He might have added that the Southern farmers are not so systematic and thrifty as our Northern neighbors, and but few of them have their farms so highly improved, yet they are not so heavily in debt. The real estate mortgage indebtedness, as furnished by 1890 census returns, show an alarming state of affairs North. This indebtedness, including city and town mortgages, ranges from \$144 to \$282 per capita in the best agricultural States North, including Pennsylvania, New York, Massachusetts and Illinois. In the South this indebtedness ranges from \$12.50 in South Carolina, \$17 in North Carolina, \$26 in Georgia to \$46 in Tennessee. In none of the Southern States will the real estate mortgage indebtedness reach over \$50 per capita. In the North every State goes above \$100. Under favorable conditions most of this indebtedness, North and South, will be cancelled, and it is plain that the Southern farmers can get out of debt earlier than their Northern neighbors.

We have never yet met a Northern farmer who is dissatisfied after living in the South a number of years, and any good Northern citizen will meet a hearty welcome in any part of the South.—Progressive Farmer, Raleigh, N. C.

### **He Was Uninformed.**

The New York Independent of August 27 contains a letter from William H. Edmonds, editor of the "Southern States" magazine, written in answer to a most remarkable communication which appeared in the Independent some weeks earlier, written by Wallace Putnam Reed, once a prominent journalist of Georgia. The arti-

cle in question, to which Mr. Edmonds replies, takes the position that Southern farmers are little better than slaves, and practically advises farmers from the North and West to refrain from settling in a locality where only one crop can be raised, and that unprofitably. It further asserts that a market cannot be found for other products than cotton, and pictures the country merchant who buys it a czar.

It is exceedingly difficult to understand how a Southern newspaper writer can be so intensely narrow and so clearly uninformed as the above position indicates. The area of tillable land in the South is growing larger year by year, yet we find the cotton acreage increasing at a smaller ratio than that of any other product. The South is becoming one vast market garden, and millions of dollars are brought from the North and East every year to pay for these garden products alone. Hardly a community can now be found that does not sell potatoes, fruits, wines, vegetables and melons to Northern cities.

Our farmers are paying more attention to cereals now than ever before, and the result is that Mr. Armour is carrying fewer dollars from the South every year. Instead of buying corn from the West, as was universal a few years ago, we are now exporting corn. The corn exported from Mobile during the year just ended shows an increase of 1,083,909 bushels over the year previous, and will be even greater next year. The farmers of the South are as independent as they care to be, and with the new advantages unfolding themselves, it will only be a few years until the Southern farmer will have wealth to correspond with his present independence and happiness, Mr. Reed to the contrary notwithstanding. —The Mercury, Huntsville, Ala.

### **Not True.**

Wallace Reed is too good a Georgian to have made such statements as were contained in his recent article to the New York Independent on "King Cotton's Slaves." Mr. Reed is wonderfully imaginative sometimes, and is often liable to wander after hallucinations in the realm of a romantic mind. His article shows this. He does both his reputation as a writer and the people of the South injustice in his attempted argument to prove that the cotton-



planters of the South are slaves to the merchants. It is true that the farmers feel sorely and oppressively the exactions of an iniquitous financial system, but this is not felt any worse by the farmers than by any other class of men operating upon small capital. It is felt equally hard by farmers, merchants, artisans and others—not farmers alone. It is not true that Southern farmers are slaves to the country merchants. Mr. Reed's article is both silly and ridiculous, to say the least of it. He has caught the wrong horn of the dilemma.—*News and Banner*, Franklin, Ga.

### **The Southern Farmers.**

An article recently appearing in the *New York Independent*, a journal of much influence in the East, has occasioned, and justly so, a considerable amount of indignation in the South. \* \* \*

But the Southern farmer is learning his lesson from low prices for cotton, and is rapidly developing into a producer of his own supplies. More varied crops are being raised in Texas now than ever before, and in a short while, even in a bad year, the Texas farmer's family will be independent of the country merchant or the city commission house for his provisions while he is waiting for his cotton to mature.

But there is a better way of ascertaining where "serfdom" exists and where the farmers are owned by others. By the census of 1890 we are informed that in Illinois, where the population is only one-fourth greater than in Texas, 128,000 acres were under mortgage to the extent of \$165,000,000, or more than twice the mortgage indebtedness on acreage in Texas. In Georgia and Iowa, representative States, with about the same population, the figures are: Acres under mortgage in Georgia, 34,000; amount of mortgages, \$16,000,000; acres under mortgage in Iowa, 171,000; amount, \$149,000,000. And compare State with State North and South and the same story is told.—*The Post*, Houston, Texas.

### **The Farmer North and South.**

In an article to the *New York Independent*, Wallace Putnam Reed, of Conyers, Ga., undertakes to review the conditions that surround the Northern farmer in the South, and directly discourages the at-

tempt on the part of the Northerner to attempt agriculture south of the Mason and Dixon line. \* \* \* To those who know anything about the conditions that surround the farmer in the North as compared with the palpable possibilities of the South the position taken by Mr. Reed is simply ridiculous, and proves conclusively that he was writing without knowing anything about his subject. The *Telegraph* does not desire to show many practical examples that contradict Mr. Reed's article, that the Northern farmer can succeed in the South, because it is a question entirely too easy of proof by any observant person. It is a fact that Northern farmers have succeeded here, and there is no doubt that the eyes of the farmers of the North and of the West are turned in this direction, and that within the next few years the development of the agricultural interests of the South, and more particularly of Georgia, by the Northern farmer will be one of the most striking instances of successful change of working fields and successful fields that the history of immigration and emigration in this country affords. The Northern farmer is satisfied with an earning of from 3 to 4 per cent. on his investment, while the intelligent farmer in the South can earn from 8 to 10 per cent., not easily, but by the same hard and persistent work that is necessary to the making of money in any field of industry.—*The Telegraph*, Macon, Ga.

### **No Truth in It.**

An article which appeared in the *New York Independent* of July 30, 1896, entitled "King Cotton's Slaves," written by Wallace Putnam Reed, dated Conyers, Ga., is one of the most remarkable productions that has ever appeared in public print.

Whatever may be the animus that inspired this article, it is certain that the object of giving a truthful statement of the conditions which surround the Southern farmer, and prospect for the would-be settler in the South who wishes to farm, was not in the writer's mind.

There may be isolated cases where farmers have the surroundings depicted by the above writer, but they must be rare; certainly no such situations can be found in Eastern North Carolina, where the farmers raise their own home supplies, and make



cotton and other crops for money only, not because they are driven to it.

Such an article as "King Cotton's Slaves" may deceive a few readers, but only such as wish to be, for the facts are many times multiplied that the South is the place where a farmer may be truly independent, and this can be easily verified by anyone.—The Journal, New Berne, N. C.

### **Made Fortunes in Farming.**

This would be an amusing story were it not so serious in its consequences and evidently in its purpose. The Item knows of colonies, and very large ones at that, all over this portion of the South, which have not only prospered, but made fortunes in farming.

Year by year the Southern farmer has escaped from debt, adjusted himself to conditions he did not produce, and today is, when we consider the distress prevailing everywhere, as near self-supporting as any agriculturists in America.—Daily Item, New Orleans.

### **Pure Fiction.**

Wallace P. Reed is a novelist, and his article in the New York Independent, headed "King Cotton's Slaves," is the purest fiction, with scarcely a single fact to commend it.

Of course, in the South cotton is the chief money crop, but not all by any means. Farmers raise their own corn and meat, and have some to sell in the towns and cities. Such a thing as buying Western corn is a thing of the past, and but little meat is bought by merchants late in summer, which is mostly to supply the demand of the non-producers. Georgia makes plenty and some to spare, and the trainloads of provisions sent to the drouth-stricken people of Nebraska is sufficient to answer Reed's article.

Then, again, the fruit industry is looming up in many sections of the State, and the income from that source is immense. In Houston, Laurens, Worth and several other counties the income from fruit will rival the receipts from cotton. Even here in Buena Vista peaches brought \$1000 per car on the track.

Statistics will show that the South is the most prosperous section of the Union, with

less mortgage indebtedness than any other section.

It is true that the farmers of the South, who had inherited ease and extravagance of ante-bellum days, did not make much money early after the war, because they abused their credit by buying extravagantly, but things have changed. Farmers are buying comparatively little on credit, living more economically and farming on business principles more than they ever did before. Had they used the methods at present in vogue ever since the war, they would have now been the most independent people on earth.—The Patriot, Buena Vista, Ga.

### **Wild Exaggerations and Flagrant Misstatements.**

Mr. Reed's article is, as Mr. Edmonds says, a series of wild exaggerations and flagrant misstatements. Because of the fact that Reed was, until recently, a member of the staff of one of the best known of the Southern papers, says Mr. Edmonds, the editor of the Independent probably assumed (and not without reason) that he was familiar with Southern conditions and was reliable. For the same reason, and because of the high character and the great influence and prestige of the Independent, this article is certain to do great harm. It is for this reason that Mr. Edmonds unequivocally contradicts the statements contained in Mr. Reed's articles, and he rightly assumes that the voice of every friend of the South should be raised in protest.—The News, Macon, Ga.

## **BOOKS AND MAGAZINES.**

### **A Book for Horticulturists.**

We have had occasion to speak of the very valuable series of books that the Macmillan Company, New York, is publishing as the "Garden-craft Series." "The Nursery Book: a Complete Guide to the Multiplication of Plants," the third volume in the series, has just been issued. The book is a very complete presentation of the best methods employed in the propagation and crossing of plants.

It treats at much length all matters pertaining to seeding, cutting, grafting, etc., the chapters on the various methods of

grafting, budding, etc., being particularly full and complete. The book is liberally illustrated, and the paper, printing and binding are in keeping with the attractive make-up of the previous volumes in this series. Everybody who has these, the "Horticulturists' Rule Book" and "Plant Breeding," will necessarily want to have the "Nursery Book," and any person interested in the culture of trees, plants, vegetables or flowers, in a large or small way, who does not possess the other two ought to lose no time in buying all three. The price of each volume is \$1.

The author of "The Nursery Book" is Prof. L. H. Bailey, professor of horticulture at Cornell University, and horticulturists of the U. S. Agricultural Experiment Station at Cornell. This statement of the authorship of the book if made at the beginning of this notice would have rendered unnecessary any comment on it.

### The Money Question.

"The Money Question" is the title of a new book by George H. Shibley, of Chicago, just published by the Stable Money Publishing Co., Chicago. The book is unique in many ways. Instead of the usual method of using type of uniform size and style, it is set in several styles of type, thus giving emphasis to particular words, phrases or paragraphs. It has no "chapters," but numerous divisions and subdivisions, with appropriate headings. The writer's statements of facts and expressions of opinion are accompanied by copious citations of authorities. The facts brought out in the text are graphically enforced by diagrams and charts, and the book is illustrated with over 100 engravings. The book presents an exceedingly interesting array of arguments in behalf of the free coinage of both silver and gold. The writer gives, with perfect honesty and in detail, the arguments of the opponents of silver coinage, and then proceeds to answer them. The reader thus gets both sides of the question. The price is \$1.50 in cloth binding, and fifty cents in paper. There are 744 large pages.

Albert Lynch, the famous French artist, is said to have given us a new and distinctive type of "American girl" in a picture com-

pleted after his return from a recent extended visit to this country. Mr. Lynch was commissioned by the Ladies' Home Journal to portray the "American girl" as he saw her, and his picture is reproduced in the October number of that magazine.

The Cosmopolitan for October contains "A Summer Tour in the Scottish Highlands," by Thomas L. James; "The Story of a Child Trainer," by Mary Badollet Powell; "The Perils and Wonders of a True Desert," by Capt. D. D. Gaillard, U. S. A.; "A Modern Fairy Tale," by Heron C. Crawford; "I Dreamed," a poem, by Dallett Fuguet; "Hofman's Object-lesson," by John J. A'Becket; "Personal Recollections of the Tai-Ping Rebellion," by Gen. Edward Forester; "The Modern Woman Out-of-Doors," by Anna Wentworth Sears; "The True History of Our Cooks," by Frances Courtenay Baylor; "To a Hyacinth Bulb," a poem, by Ada A. Mosher. The Departments, "Some examples of Recent Art," "In the World of Art and Letters," and "The Progress of Science," are as interesting as usual. It would be sufficient commendation to say that the Cosmopolitan holds its own, but it does more than that; it gets better all the time.

A feature of the October Home Magazine is the series of six full-page illustrations, reproduced in half-tone from the famous Arctic historical paintings by Albert Operti. Mr. Operti was the artist of the Peary expedition, which has just returned from Greenland. "A Remarkable Political Campaign" is a history of the strenuous attempt that has been made for the past year by the single-taxers to carry the State of Delaware at the coming election. It is a unique campaign in conception and for a unique economic theory. William M. Callingham, the author, is one of the single-tax advocates. There are twenty-five illustrations from photographs. Of opportune interest in the heat of the political campaign is the first of three papers on "Our Presidents," by Professor Guy Carleton Lee, of Johns Hopkins University. Professor Lee gives us considerable that is new in presidential biography and political history. "The Whirligig of Time," a review of current events, by James Breck Perkins,



the historian, will hereafter be a leading feature of the magazine. The poetry in the number is by Minna Irving and Mary E. Stone Bassett, with a number of selections from foreign sources. There is the usual amount of high-class fiction, book reviews and commercial travelers' news. Of especial interest is the information contained in the department devoted to the great fair for commercial travelers to be held at Madison Square Garden, New York, from December 15 to December 28. This fair is to raise funds to complete the national home for commercial travelers at Binghamton, N. Y., to which noble object also every dollar of profit realized from the publication of *The Home Magazine* is devoted.

The contents of the *Atlantic Monthly* for October include "Five American Contributions to Civilization," a summary of the great results of American civilization; "The Political Menace of the Discontented," a study of the campaign; "Marm Lisa, V.-X.," the second of the three instalments of a remarkable story; "Cakes and Ale," a study in older English literature; "The Spirit of an Illinois Town," the conclusion of this spirited Western novel; "The Imperiled Dignity of Science and the Law," the foolish way in which expert testimony is taken in court and its demoralizing effect; "Girls in a Factory Valley," further life studies among operatives; "The Old Things," concluded; "The Fate of the Coliseum," a narrative of the fate of this great ancient theatre; "Abandoned: A Tale of the Plains;" "Sunday in New Netherland and Old New York," a quaint historical study of colonial times, and other articles, besides the Departments, including a new one, "Men and Letters."

A study of negro development since the war, as shown in a typical colony, is contributed to the October number of *Harper's Magazine* by Martha McCulloch-Williams, with illustrations by E. W. Kemble.

In fiction the October number of *Scribner's Magazine* is made notable by the last unpublished story of H. C. Bunner, which was found among his papers after his

death. It is in a manner rather unusual with him, in that it deals with the grotesque and terrible.

Every article in the October *Scribner's*, except Barrie's serial, is by an American author, and the subjects are strongly American and of timely interest and importance, such as "The Government of Greater New York," "The Expenditure of Rich Americans," "The New York Working-girl," "The Sculpture of Olin Warner," "The American Lighthouse System," etc.

That long-established and sterling magazine, the *Living Age*, Boston, presents in its weekly numbers the best fiction, the ablest essays, the most interesting bits of biography, adventure and travel, in a word, the most readable and profitable contributions to foreign periodical literature. Recent numbers contain, with much more equally good and interesting reading, "Mrs. Meynell's Two Books of Essays," by George Meredith; "Recent Science," by Prince Kropotkin; "An Excursion in the Atlas Mountains," by Walter B. Harris; "Sir Henry Parkes," by A. Patchett Martin; "Some Curious Duels," by J. Cuthbert Hadden; "Thomas Henry Huxley," by Wilfrid Ward; "On an Old American Turnpike," by A. G. Bradley; "Through Touraine on Wheels," by Sir Herbert Maxwell; "Hjaltland," by Col. T. P. White; "Charilaos Trikoupes," by James D. Bourchier; "La Saisiaz in 1895," by A. Taylor Innes, and "Gustavus Adolphus," by Spencer Wilkinson. At least one short story, and selections of recent poetry, appear in each weekly issue.

The editor of the *Review of Reviews*, in his October "Progress of the World," discusses the bearing of the early State elections on the result in November, reviews the careers of Generals Palmer and Buckner, the candidates of the Indianapolis Convention, comments on the methods of the managers in the present campaign, and presents the usual full and lucid summary of current events in foreign lands, devoting special attention this month to the Eastern question, the death of Prince Lobanoff, and the Turkish massacres.

# THE SOUTHERN STATES.

NOVEMBER, 1896.

## THE REMAKING OF THE SOUTH.

*By Henry M. Holladay.*

Thirty-one years have passed since the curtain fell upon the tragedy of secession. In the history of the South since that time is to be found the best, if not the only, augury of what course its future must take. The purpose of this paper is a hurried survey of the condition of the South at the close of the war, a short resume of the pecuniary losses it had suffered during the conflict, a brief review of its industrial growth in recent years and a glance at the possibilities of its future.

In the epoch beginning with the year 1861, the South suffered a long series of misfortunes. All of these were calamitous in effect, and many were revolutionary in character. The reader must pause as each of these is named, and consider for a moment the effect of a similar or analogous disaster upon any civilized community today, if he would understand the woful plight in which the South was left in the spring of 1865, and the causes which have since that time retarded her prosperity.

The flower of her youth and manhood had been swept away by the storm of battle. An invading army, numbering a million men, camped upon her soil, completing the conquest which had cost so much in treasure and in blood.

Many of her cities and towns were in ashes or torn and rent by shot and shell. Her barns were empty, her fields bare, her lands wasted, her homes sacked and pillaged.

All importations from foreign coun-

tries and the North had been cut off for four years. This period was sufficiently long to exhaust the supply of clothing, household goods and farming implements, even without the waste and destruction of war.

Her railroads had been wrecked and transportation of freight was difficult and expensive, or entirely suspended.

Her system of finance had been wiped out. Banks were broken and deposits gone. Gold and silver had disappeared in the stress of war. Paper money issued by the Confederacy and the State governments was worthless. United States notes had not come into circulation. For a time there was no currency.

Debts on every hand, and uncertainty as to their payment, paralyzed alike the debtor and creditor.

The constitutions of the Southern States had been abrogated, and their systems of law made null and void. Chaos reigned. No man knew under what manner of government he would have to live, or to what extent the immunities of a freeman would be withheld from him.

Four million slaves had been emancipated. They had neither the self-control, the forethought nor the habits of thrift which necessity breeds in a race of freemen. They were incapable of discrimination between liberty and lawlessness. They looked upon their former masters with distrust or enmity, and followed the leadership of men who lacked the knowledge or the patriotism to guide them aright.



The system of labor to which the people of the South had been accustomed for generations had been overthrown. The evolution of a new system was the work of time, and many years were necessary to enable master and servant to adapt themselves to the new order of things. A widespread hope among the negroes that homes would be given them by the national government, and a widespread fear among the whites that their lands would be confiscated, intensified the unrest of the time.

To the conquered the cup of their woe seemed full at the end of the armed conflict. But close upon the disasters of war followed calamities not less tragic and real, and possibly even more far-reaching in evil effect. The service which Lincoln, and Lincoln alone, could have rendered a people divided, estranged and embittered by thirty years of strife and four years of carnage is beyond computation. The loss which the South suffered in the death of that great-hearted man and unselfish statesman can never be known. This grievous loss became, perhaps, the greatest of the misfortunes of the South in the evils which resulted from his murder. Hearts ready to melt into sympathy with the vanquished were rekindled to fury, and the course of history was changed in an hour.

When the State governments of the South came to be reconstructed, political power had passed into the hands of adventurers or fanatics from the North, native white men who had sold themselves to their former slaves for power and help, and negroes who came from the cotton field, the stable or the tobacco factory. In constitutional conventions and State legislatures there was a dearth of statesmanship and patriotism, but cupidity, greed, inordinate lust for office and antagonism to and rancor against the white race were strongly in evidence. The temper of the people at this time, their mental attitude toward their conquerors and the world is essential to a correct view of the South thirty years ago. The misfortunes and calamities

resulting from the war were cumulative in effect. They produced upon the people a sense of injustice, a depression of spirit, a crushing of hope, which were fatal to prosperity. The poverty, want, suffering and privations, the gloom and despair of those long and trying years immediately succeeding the close of the war are beyond the power of imagination to describe—almost beyond the power of memory to recall. Worse than the agony of war, more bitter than physical discomfort or the pang of defeat, was the conviction impressed upon the minds and hearts of her people that the South had been lifted upon the cross of a world's contumely. That upon her, in her woe and desolation, were laid not only the faults and sins of which she had been guilty, but the most heinous and revolting crimes which the imagination of man could conceive. It is not strange that men in this mood thought of the future only with gloomy foreboding. Prophets always arise in such a time, and prophecies were rife. The calamity-howler appreciated the opportunity of the age, and made the most of it. The star of the South, it was said, had set forever. Southern fields would return to the wilderness. Her white inhabitants would slowly decrease and die or be driven to seek new homes elsewhere. Her negroes, released from the control and protection of masters, would revert to savagery. The reasoning upon which this belief was based was held to be irrefragable.

The South was strictly an agricultural country, and cotton was its staple product. Cotton could be cultivated and harvested only by negro labor. But the negro would not work except as a slave.

This belief was generally accepted in the South. It became almost as fixed and sacred as an article of faith in many minds. The vigor, energy, sturdiness and endurance of our hardy stock were overlooked. The facilities and opportunities which the South offered to manufacturing enterprises were unappreciated. The mineral wealth which her mountains conserved



was unknown or unaccounted among her available resources.

We have seen that the misfortunes and losses of war were followed by the evils of reconstruction. These, in turn, made inevitable what should have been foreseen by thoughtful men, and what statesmanship would have made unnecessary.

When the military power of the national government was removed from the South, the dominant instinct of the English race asserted itself. That force which impels men of our blood to govern themselves has manifested its strength from the dawn of English history down to the conspiracy of Johannesburg. In no English-speaking community has it been more potent than in the South. In certain States and sections of the South the whites proceeded to evade the letter or to nullify the purpose of the law by craft, by guile, by bribery or by force. Some semblance of order and good government was held to be the first necessity of civilized life. Never was the truth of Emerson's saying, that good men must not obey the law too well, more mournfully or more tragically brought home to the hearts of any people. Necessary as drastic remedies were to cure the evils of the time, they have since proved the source of other evils from which the South now suffers and must continue to suffer for some years to come.

Passing from this hasty and inadequate survey, the accuracy of which is, of necessity, a question of individual opinion, let us attempt to form some idea of the loss of property in the South during the four years of war.

From such imperfect statistical data as we have, a rude estimate may be made, and perhaps from this source, uncolored by feeling, may be drawn the truest conception of the difficulties and dangers which the Southern people have overcome.

The assessed valuation of all property, real and personal, in the Southern States, including Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas and

Virginia, in 1860 was \$4,861,970,635. When the census was taken in 1870, five years after the close of the war, the assessed valuation of all property, real and personal, in the same States, including the new State of West Virginia, had fallen to \$2,573,782,119. But for two reasons the assessment of property in 1870 was too high. The paper money inflation of that period swelled the figures far beyond the real value of property. And again, it was impossible for the census enumerators at that time to fully understand the radical nature of the revolution through which the South was passing, or to appreciate its destructive effect upon the value of real estate. The truth of this statement is evidenced by the returns of the census taken ten years later. The assessed valuation of property in the Southern States fell from \$2,573,782,119 in 1870 to \$2,370,923,269 in 1880.

If we reduce the valuation of 1870 by 25 per cent., we have the following figures:

Valuation of property in 1870....	\$1,930,336,590
Valuation of property in 1880....	2,370,923,269
Increase in ten years.....	\$440,586,679

It is apparent, either that these figures are approximately correct, or that there was an actual decrease in values for a period extending over fifteen years subsequent to the termination of hostilities. The latter alternative is improbable, if not impossible. Assuming, therefore, that the assessed valuation of property in 1870 must be reduced 25 per cent. in order to find the true value, we have the following estimate of the decrease in values during the ten years, covering the war period:

Assessed value, 1860.....	\$4,861,970,635
True value, 1870.....	1,930,336,590
Decrease in ten years.....	\$2,931,634,045

This estimated decrease in values is borne out by the official estimates of the true valuation of property at the time. Attention is called to the fact that inflation of values for the whole Union probably averaged 25 per cent. in 1870. Reducing the official estimate of the true value of property in



the Southern States in 1870 by 25 per cent., we have the following result:

True value, 1860.....	\$5,868,209,219
True value, 1870.....	2,650,244,310
Decrease .....	\$3,217,964,909

These figures leave little room for doubt that the decrease in the value of property in the South between the year 1860 and the year 1870 was not less than \$3,000,000,000. But simply to say that the South had lost more than one-half of its property conveys no real impression of its condition in 1865. The property which remained to the Southern people was principally land. As late as 1891 Mr. J. R. Dodge, the statistician of the Department of Agriculture, said that only "from a sixth to a fifth of the land in the South is utilized for production, and millions of acres of its richest and deepest soils are as yet untouched." This being true, the greater portion of the property in the South was dead capital. It brought the owner no income, it could not at that time be made remunerative, but by taxation it became a source of expense. The lands of the South are a vast reservoir of wealth, but how impossible it was for her people to draw upon this reservoir becomes more evident by a further examination into the nature of the losses occasioned by the war.

The assessed value of farming implements and machinery in the Southern States in 1860 was \$90,446,009. By 1870 the assessed valuation of farming implements and machinery in the same States had fallen to \$55,831,280. From this sum must be deducted 25 per cent., \$13,957,820, leaving \$41,873,460, which may be taken as the true value. Thus it appears that five years after the close of the war the value of farming implements and machinery was several million dollars less than one-half the value in 1860.

The number of horses and mules on farms in the South in 1860 was 2,650,050. When the census was taken in 1870 the number had fallen to 2,050,583, showing a decrease in ten years

of 599,467. In Texas there was an increase in horses. This increase was, of course, in ranch horses, and therefore that State has been excluded from this count. The first necessity of the farmer was a team for the plow. His first purchase, when it became possible to buy anything, was a horse or a mule. He could live, and in many instances did live, without coffee, sugar or meat. He could go half clad or clad in rags. But no land could be broken and no crop cultivated without a team. Before the census was taken in 1870 the Southern farmers had five years in which to replace their teams lost during the war, by purchase and by breeding. It would seem probable, therefore, that the real decrease in the number of horses and mules between 1861 and 1865 was little less than 1,000,000.

The number of milch cows in the Southern States, including Texas, in 1860 was 2,975,053. In 1870 they numbered 2,375,995, showing a decrease in the ten years of 599,058.

In 1860 the number of oxen and other cattle in the Southern States was 8,388,412. In 1870 the number had fallen to 6,816,211, showing a decrease in ten years of 1,572,201, and making an aggregate decrease in milch cows, oxen and other cattle of 2,171,259.

The decrease in the number of sheep for the same period was 749,958. The decrease in the number of swine was 6,749,118. The total decrease in the number of animals on farms for the ten years was:

Decrease in horses and mules.....	599,467
Decrease in milch cows.....	599,058
Decrease in oxen and other cattle...	1,572,201
Decrease in sheep.....	749,958
Decrease in swine.....	6,749,118

Total decrease.....10,269,802

There must have been a large increase in the number of farm animals between 1865 and 1870, and therefore it cannot be doubted that the real decrease between 1861 and 1865 was much larger than these figures indicate.

A comparison between the cotton



crop in 1860 and the crops produced in the years immediately succeeding the war throws a strong light upon the condition of the South in its darkest hour. It brings into clear view the impoverishment of the people, the want of farm animals and farming implements, and the disorganized state of labor. The cotton famine in the markets of the world, extending over a space of four years, had raised the price of that commodity to exorbitant figures. This was an incentive which brought every acre under the plow that it was possible to cultivate. The production of cotton in the South rose steadily from 2,355,257 bales in 1851, until in 1860 it touched the high-water mark of 4,669,770 bales. The crop for the year 1866 was 2,193,987 bales. In 1867 the production fell to 2,019,774 bales. In 1868 it rose to 2,593,993 bales, and in 1869 it was 2,439,039 bales.

To the other adversities of the South must be added the increase in the burden of taxation which followed the close of the war, and proved a serious impediment to the restoration of prosperity. The total revenue of the United States government in 1860 was \$56,000,000. The population of this country was then 31,443,000, and the per capita taxation imposed by the national government averaged considerably less than \$2. In 1870 the population of the Union had grown to 38,558,000, but the total revenue required by the national government had risen to \$395,959,834, a per capita tax of \$10, or more than fivefold what it was in 1860. This of itself imposed a heavy burden upon a people who had lost more than half their property, and who were passing through the throes of a revolution which was political, economical and social, which had shaken society to its foundation and strained every timber in the structure.

But this was by no means the only increase in the burden of taxation, as will be seen by the following table, which shows the aggregate sum collected for State, county and city taxes

in the Southern States in 1860 and in 1870:

	1860.	1870.
Alabama .....	\$851,171	\$2,982,932
Arkansas .....	635,393	2,866,890
Florida .....	159,121	496,166
Georgia .....	797,885	2,627,029
Kentucky .....	2,148,241	5,730,118
Louisiana .....	4,960,780	7,060,722
Mississippi .....	954,806	3,736,432
North Carolina .....	1,044,732	2,352,809
South Carolina .....	1,280,886	2,767,675
Tennessee .....	1,102,793	3,381,579
Texas .....	533,265	1,129,577
Virginia .....	3,672,689	4,613,798
West Virginia .....	.....	1,722,158
	\$18,141,262	\$41,467,885

While the value of property in these thirteen States had decreased \$3,000,000,000, or more than one-half, the aggregate sum of local and State taxes had increased from \$18,000,000 to \$41,467,000, or about 130 per cent., an increase in the rate of taxation of about 550 per cent.

It should be remembered that this enormous increase in the burden of taxation was not imposed upon themselves by a people in buoyant hope, with industries prosperous and growing. In the one case it was imposed by the power of the conqueror. In the other by negroes, by aliens, antagonistic and hostile Southern people, and by native white mercenaries. There are exceptions to all rules. But this fairly describes the men who were in power in the South during the reconstruction period.

With this brief statement of facts, which was necessary to give a true idea of the condition of the South when its fortune had fallen to its lowest ebb, we may now turn to a subject which is more pleasant. Let us see what the South has done toward renewing her strength, restoring her prosperity and laying the foundation of future growth and wealth.

Thirty years is a brief period in the development of a country. It is but as a day in the evolution of society. One-half of this time the South passed in a state of uncertainty, turmoil and political strife. For reasons which have been briefly adverted to, the problem with which the Southern people were confronted was far more intricate and difficult than the settlement of new and unbroken territory. Immigrants passing into new lands are



usually men in the vigor and prime of life. The aged, the weak and the infirm of mind or body are for the most part left behind. Men seeking new homes are commonly those who most readily adapt themselves to new conditions and new environments. Nowhere is the confidence of the citizen in his rights and immunities as a free-man more marked than in a new community. Far otherwise was it with the people of the South, as we have seen.

Wearily, painfully, almost unconsciously the South emerged from the slough of despond and the valley of death. So slow was the change, so gradual the revival of prosperity, that it long passed unnoted save to the calm and thoughtful mind, enlightened by a heart of hope. Even in this day it is not rare to meet men of more than ordinary intelligence who assure you that the country has been going to the dogs for the past thirty-five years. But these are old men, into whose hearts the canker of poverty and woe has eat too deep for cure. In this world they may never hope to find surcease from sorrow. Their deeds and their sufferings entitle them to respectful consideration, but from their verdict an appeal must be taken, if we seek the truth, uncolored by feeling.

We have seen that while the assessed valuation of all property, real and personal, in the South in 1870 was \$2,573,782,119, its true value probably did not exceed \$1,930,336,590. The assessed valuation in 1890 had risen to \$3,731,097,264, an increase of \$1,800,760,674, or very nearly twice as much as the true value in 1870.

The assessed value of farms in the South in 1870 was \$1,389,985,804. The assessed value of farms in 1890 had grown to \$2,345,645,348. When it is remembered that the assessed valuation of 1870 was considerably above, and the assessed valuation of 1890 considerably below, the true value, it seems reasonable to say that the value of farms at the latter date was at least two and one-half times as great as twenty years before.

The value of farming implements

and machinery in the Southern States in 1870, as has been shown, was probably \$41,873,460. In 1890 the assessed value of farming implements and machinery was \$85,898,790, an increase of \$44,025,330, or more than double.

In the same period the number of horses and mules on farms in the thirteen Southern States, including Texas, rose from 2,536,409 to 4,960,530, an increase of 2,424,121.

The number of milch cows rose from 2,375,995 in 1870 to 3,956,222 in 1890, an increase of 1,580,227.

The number of oxen and other cattle rose from 6,816,211 in 1870 to 12,415,894 in 1890, an increase of 5,599,683.

The number of sheep rose from 5,188,809 in 1870 to 8,972,952 in 1890, an increase of 3,784,143.

The number of swine rose from 11,144,344 in 1870 to 17,606,058 in 1890, an increase of 6,461,714.

The production of wheat rose from 30,066,757 bushels in 1870 to 54,101,000 bushels in 1891, an increase of 24,000,000 bushels, or 80 per cent.

The production of corn rose from 237,370,301 bushels in 1870 to 517,061,000 bushels in 1891, an increase of 279,000,000 bushels, or largely over twofold.

The production of oats rose from 28,751,899 bushels in 1870 to 68,064,000 bushels in 1892, an increase of 39,312,101 bushels, or more than twofold.

The production of tobacco rose from 178,418,917 pounds in 1870 to 366,455,886 pounds in 1893, an increase of 188,036,969 pounds, or more than twofold.

The production of rice rose from 73,635,021 pounds in 1870 to 128,590,434 pounds in 1889, an increase of 54,955,413 pounds, or nearly 75 per cent.

The production of sugar rose from 104,832,946 pounds in 1869-1870 to 370,579,307 pounds in 1891-1892, an increase of 265,746,361 pounds, or more than three-and-one-half-fold.

The production of cane molasses rose from 6,593,323 gallons in 1870 to



20,629,868 gallons in 1891-92, an increase of 14,036,323 gallons, or more than threefold.

The production of pig iron in the South in 1870 was 130,336 tons. In 1892 it had risen to 1,791,036 tons, an increase of 1,660,700 tons.

The total production of pig iron in the United States in 1870 was 2,052,821 tons. In twenty-two years the production of pig iron in the South grew from a nominal sum to one approximating the total product of the Union in 1870. And while the production of the whole Union increased during this period four-and-one-half-fold, the increase in the South was more than thirteenfold.

The total production of pig iron in the United States in 1892 was 9,157,000 tons. Of this, Pennsylvania, Ohio and Illinois produced 6,365,168 tons, the Southern States 1,791,036 tons, and all the other States and Territories 1,000,796 tons. The South is still far behind Pennsylvania, Ohio and Illinois, but it has distanced all the rest of the Union in the production of pig iron. And yet it has barely made a beginning in the development of its beds of iron ore. Only three European countries now produce more pig iron than the South—Great Britain, Germany and France. The South is now far in the lead of Austria-Hungary, Belgium, Russia and Sweden.

The production of coal in the Southern States in 1880 was 3,756,144 tons. In 1894 it had risen to 24,000,000 tons, or more than sixfold, in fourteen years.

The aggregate production of bituminous and anthracite coal for the United States in 1891 was 150,505,745 tons. Of this, Pennsylvania, Ohio and Illinois produced 108,913,663 tons, the South 20,094,453 tons, and all the other States and Territories 21,497,629 tons.\*

The number of miles of railroad in operation in the Southern States in 1870 was 12,554. The number of miles in operation in 1891 was 43,225,

an increase in mileage of nearly three-and-one-half-fold.

The production of cotton in the South during the most prosperous decade of its history was as follows:

1851.....	2,355,257	Bales.
1852.....	3,015,029	"
1853.....	3,262,882	"
1854.....	2,930,027	"
1855.....	2,847,339	"
1856.....	3,527,845	"
1857.....	2,939,519	"
1858.....	3,113,962	"
1859.....	3,851,481	"
1860.....	4,669,770	"

Total production for ten years.....32,513,111 Bales.

The average weight of a bale was then 440 pounds. Reduced to pounds, the aggregate weight of the raw cotton produced in the ten years immediately preceding the war was 14,305,768,840 pounds.

The production for the past ten years was as follows:

1886.....	3,182,305,659	Pounds.
1887.....	3,157,378,443	"
1888.....	3,439,172,391	"
1889.....	3,439,934,799	"
1890.....	3,627,366,183	"
1891.....	4,316,043,982	"
1892.....	4,506,575,984	"
1893.....	3,352,658,458	"
1894.....	3,769,381,478	"
1895.....	5,036,964,409	"

Total.....37,827,781,786 Pounds.

The average annual production for the ten years preceding the war was 1,430,576,884 pounds. The average annual production for the past ten years has been 3,782,778,178 pounds, or more than two and one-half times as great as during the most prosperous period of the history of the South.

But this fails to show the progress which has been made since the war, the time from which our present development is to be dated.

In 1865 the highest price paid for cotton in the New York market was \$1.22 per pound, and the lowest 33 cents, while the average price of middling upland cotton for the year was 83 cents. In 1866 the price ranged from 32 cents to 52 cents, the average price for the year of middling upland cotton being 43 1-5 cents. In 1867 the price ranged from 15 cents to 36 cents, the average price for the year being 21 1/4 cents. In 1868 the price ranged from 16 cents to 33 cents, the average price for the year being 24.85

\* Indian Territory and New Mexico included with Southern States.



cents. In 1869 the price ranged from 25 cents to 35 cents, the average price for the year being 29.01 cents.

Cotton is now worth only about one-third the price it was then bringing, but production has increased from an annual average of 1,017,147,230 pounds for the four years immedi-

ately succeeding the war to an annual average of 4,166,395,082 pounds for the past four years, or more than four-fold. The market supply of cotton for the world in the year 1894-95 was 10,540,000 bales, and of this quantity 8,248,000 bales was of American production.

[To be continued.]

## QUEEN COTTONSEED.

*By Edwin Lehman Johnson.*

If cotton deserved a royal title, if it was granted without protest in a republic, even though that title was associated with slavery, civil war and a one-crop, unscientific agriculture, how much more worthy is the cottonseed of a title which will show its importance and dignity, the wholesomeness and purity of its products.

The cottonseed had no such evil associations, became a source of wealth only after peace and freedom were restored, has defied and destroyed trusts, fostered a spirit of manufacture in the South, promoted diversified and scientific agriculture; its manufactured products, suitable alike in their great variety as food for man, feed for cattle and fertilizer for land, have been working a silent, economic revolution throughout the world and given rise to a new South.

The new South has made famous no man more justly deserving of fame, no man more patriotic, no man more persuasive in eloquence, no man who has exerted a wider and better influence North and South, than the new South's own discoverer, Henry W. Grady.

It was Henry W. Grady who first discovered and made widely known the virtues of the modest cottonseed,

and likened it to Cinderella, the fair maiden of fable, who is the first heroine of every American child, and whose elevation from the dust-heap and the ashes of an humble home to the palace of a prince was not more romantic than the elevation of the cottonseed from a despised outcast, the refuse of the cotton gin, to a place of the first economic importance in the agriculture and commerce of the world.

Prophet though he was, Henry W. Grady did not fully foretell, nor did he live to see, the divinely royal, because divinely beneficent, progress of the cottonseed. Were he alive today, with that ready appreciation he always felt and showed for everything that contributed to the progress of the world, as well as his own beloved Southland, and with that broader view behind and before him which I have feebly attempted to disclose, would he have remained content with having bestowed the title of princess upon the cottonseed?

Would he not rather, in a tribute more noble than my poor pen dare attempt, have placed our Southern Cinderella on the throne where King Cotton is no longer worthy to sit, and called upon all patriotic Southerners to do homage to Queen Cottonseed?

## A REPORTED NEW VARIETY OF COTTON.

*By Albert Phenix.*

Down in Georgia, on a farm overlooking the domes and smokestacks of Atlanta, an experimenter named T. A. Jackson has produced a variety of cotton, which, if half claimed for it holds good in practical extensive culture, will work nothing short of a revolution in cotton-growing. The imputed distinguishing characteristics of this variety are prolific yield—from two to four bales per acre—and a fibre long, stout and silky, and consequently of greater value per pound than most of the cotton now raised in America.

Fugitive references to this cotton have appeared in the newspapers of the country during the past year, and some apparently apochryphal accounts of its history, its characteristics and the dismay it has spread among the growers of ordinary cotton have recently been printed in New York and Atlanta papers. A New York newspaper published a cut of a supposititious patch of this cotton, in which the cotton stalks towered like a forest of trees above the figure of a man in the foreground. An Atlanta paper published a story to the effect that a club of South Georgia farmers had offered \$18,000 for all the seed raised, with the intention of destroying every seed extant and thereby averting a competition conceived to be ruinous to their interests. Having given some time to an investigation of the subject on the ground, I find that while the whole matter has scarcely proceeded beyond the experimental stage, and that some misinformation and exaggeration have been given currency, there is entirely sufficient foundation for large expectations, to say the least, and it is difficult to understand the apathy existing among cotton men in Atlanta and elsewhere, as evidenced by the fact that no recog-

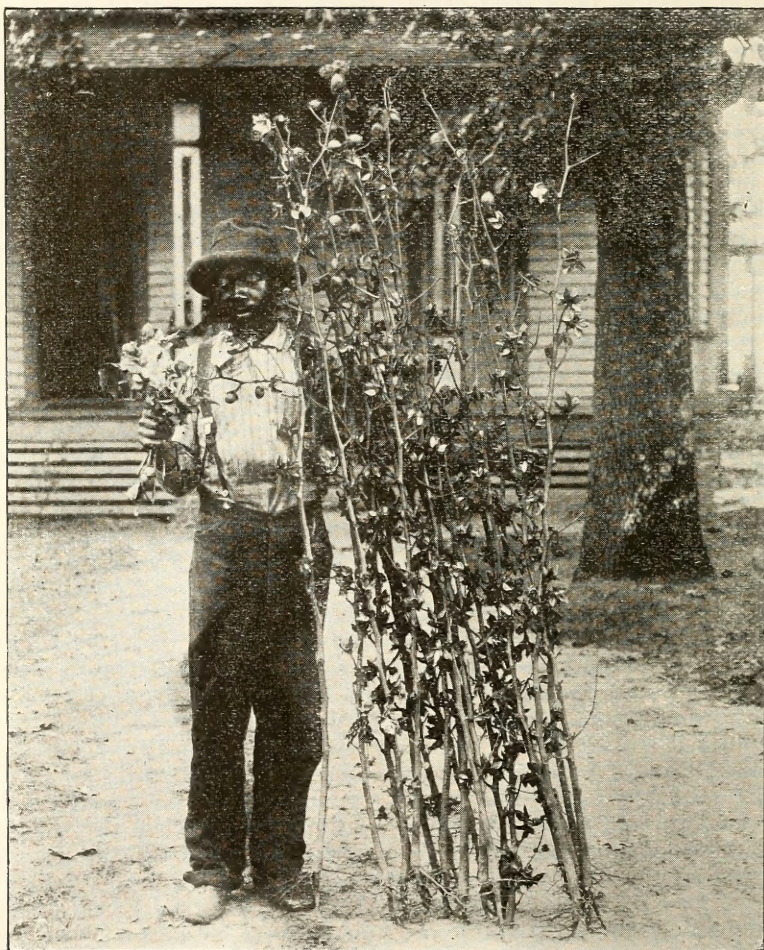
nized cotton expert has as yet taken the trouble to make a thorough investigation of the matter. While it is true that Mr. Jackson has received a large number of letters, many inclosing checks and asking for a handful of the seeds, and has also had numerous callers of late to inspect the patch and samples of the cotton, yet I find that none of the large cotton houses or planters of Atlanta or elsewhere have taken anything more than the merest passing, superficial interest in the subject. Some cotton men to whom I have spoken regarding the new cotton are outspoken in their skepticism, but further inquiry in every case has demonstrated that this feeling is simply part and parcel of the suspicion which has forever been accorded to any new thing. "Every year somebody pretends to have discovered a wonderful new cotton, and we don't bother ourselves to investigate any of them." This remark, by the representative of one of the foremost cotton dealers of the South, probably describes the situation as applicable to all.

And yet when I have mentioned some of the peculiarities of this Jackson cotton, and have inquired if any cotton now raised in the South possesses such characteristics, the answer has been frankly, "no." I have several times visited Mr. Jackson's place, and have made a somewhat detailed examination of the patch, the plant and the product. I measured the patch, and found it contained a few feet (thirteen square feet) more than one-third of an acre. I was informed that there had been picked some 800 pounds of seed cotton from this small patch, and there are top bolls enough already matured to increase this yield to possibly 1000 pounds, which would be from 2400 to 3000 pounds of seed



cotton to the acre, and this in a year of unusual and blighting drouth. It is said that no commercial fertilizers were used; that the site was selected because of the poor quality of the soil, and that the crop was raised without irrigation (which might have been supplied), the intention having been to give the severest possible test to the

I counted the open and the matured bolls only on about one hundred of these stalks. The highest I found was fifty-three; a great many had twenty, and those having less than five were very infrequent. It is claimed that ordinarily it should average ten bolls to the stalk. The rows are two feet apart, and the plants four inches apart



PHOTOGRAPH SHOWING HEIGHT OF COTTON.

new variety. Granting these conditions, the result is scarcely less than marvelous. The stalks will average six feet in height, while ordinary cotton on farms immediately adjoining, and with soil of apparently similar character, is in this drouthy year only one to two feet in height.

in the row; the stalk shoots up straight, with apparently little tendency to "stool" or limb, and it fruits directly from the stalk. A leaf bud appears on the stalk, a short twig or stem is developed, and at the joint of the leaf and the twig the fruit, with from one to five bolls, is formed. The



history of the plant so far is, that when the boll matures the leaf drops off, so that there are never more than three or four leaves at a time on the stalk, they being at the top, an advantage in picking the cotton, as well as a safeguard against disaster should the plant be attacked by the army worm, for he would starve to death. Some commentators have suggested that this tendency to shed its leaves may be due simply to the drought, which somewhat similarly affects all vegetation, but this hypothesis would hardly account for the fixed habit of this plant to invariably shed its leaf only after the maturity of the boll.

As I remarked before, it can scarcely be claimed that this cotton has proceeded beyond the experimental stage, and until it is scientifically investigated and given the benefit of extensive cultivation throughout a number of seasons in various places, and its progress from germination to maturity, and then to the loom, has been carefully noted by a number of authorities, there must be an element of speculation as to its methods and its merits; but there hardly seems room for reasonable doubt that it is a distinct and new variety of cotton, and that it will give results far beyond any variety now grown. I was talking with an expert the other day, who admitted he had made no examination of it, but who expressed the belief that it was simply one of the varieties heretofore grown in this country. I asked him if it would be possible to raise an average of ten bolls to the stalk of ordinary cotton if it were planted, as this was, in two-foot rows four inches between stalks. He promptly declared it would not. Ordinarily, cotton is planted in three to four-foot rows, from twelve to sixteen inches apart. And here, it would appear, is a radical point of advantage, which, waiving all other considerations, is sufficient to merit the most exhaustive experimentation. In an acre of ordinary cotton, with four-foot rows and at twelve inches apart, there would be 10,920 plants. With this cotton, planted in two-foot rows and at four inches apart,

there would be 66,150 plants to the acre. So that, allowing for bad season, accidents, ravages of insects and worms, it would appear that two bales to the acre might almost be counted on as an average crop. For one thing does seem to be clearly established, and that is, that, unlike the ordinary cotton, this plant is more thrifty and prolific when planted closely.

At the time I visited the patch the open bolls had been pretty well picked, but at Mr. Jackson's house were a number of stalks which had been cut with all the bolls filled. No photographs had been taken of the cotton. I secured a photograph of the field, with pickers just cleaning up the patch, and had several of the stalks with filled bolls photographed. The shortest of these is about two feet high, a cutting, and has fifteen open bolls. I also had a bundle of the stalks pulled up by the roots and had them photographed while being held by a negro laborer. They were average stalks, and from the root to the tip measured about seven feet.

On one of the five-foot stalks in the house I counted fifty-five open bolls. I found that thirty-two of these bolls had five locks and eight had six, and I was informed that some had been found with as many as ten.

The seed of this cotton is another peculiarity. It is smaller than that of ordinary cotton, so that 1500 pounds of seed cotton is calculated to make a bale of the lint, instead of 1600 pounds, as with ordinary cotton. It appears also to have a characteristic mark, a seam down the centre of one side, and Mr. Jackson is authority for the statement that it germinates from the centre instead of from either end, as does the common cotton. It is said there are nine seed to each lock, invariably.

No new thing ever appeared shrouded with a more mysterious origin or had a more romantic history. This is the story that is told: Two years ago a soldier of fortune, a sort of wandering Jew, named Keil, stopped off at Atlanta and tarried awhile. He fell in with Mr. B. T.



Jackson, took a fancy to him and exhibited a varied collection of curios which he said he had gathered in his travels. Among them was a wonderful specimen of cotton. It was a cutting eighteen inches long, which contained fifty-six perfect open bolls. He had cut it, he said, from a 20-foot stalk he found growing in front of a hut, in

aroused. His father has long been an experimenter in the fields of horticulture. He produced the Jackson wonder butter bean, which has been taken up and pushed by one of the leading seed men of the country; he startled some friends once by giving them ripe tomatoes from the top of a vine and unearthing potato bulbs at its roots; a



PHOTOGRAPH SHOWING OPEN BOLLS.

a wild part of interior Africa, near the Congo river, 700 miles from the coast. There were numerous other stalks of the same height, and they seemed to be used for ornamental purposes. This cutting he had secured and kept simply as a curiosity.

Mr. Jackson's interest was naturally

vast mystery till he explained his success at grafting; and there is in his door yard a peach tree which bears double blossoms like a rose, and peachy-looking fruit which tastes like the seed of a rose, for it is a peach graft on a rose stock. Finally, it was agreed that the Jacksons should take



the cotton and see what it would do in this country. From this seed fifty-seven stalks only were raised, but some of them were wonders. Mr. Jackson sent three stalks to the Atlanta exposition, where they appeared in the exhibit of the Plant Railway System. One stalk was seven feet high, another nine and another fourteen, and there were 158 bolls on this one. The results were so satisfactory that Mr. Jackson concluded to send Keil back to Africa for several bushels of seed. He was gone four months, and when he returned reported that he found the whole region where he had secured the cotton devastated by a forest fire, and there were no traces left of either cotton or villagers.

So taking the seed produced by his fifty-seven stalks, Mr. Jackson selected the soundest and best and planted the patch here under discussion.

What will be the future of the cotton is yet problematical. It is true that a responsible-looking man was in Atlanta, representing himself to be the agent of a crowd of South Georgia farmers who were ready to pay \$18,000 for the seed to destroy them; but he didn't succeed in reaching Mr. Jackson. Negotiations were begun to sell the entire product, some ten bushels

of first-class seed, to New Orleans parties, but they evidently had no faith in the representations made, and beyond sending a telegram to an Atlanta house which could give no information, they took no steps to investigate the merits of the cotton. It begins to look somewhat as though the singular fate which has been accredited to the stranger will pursue it to the end. The ten bushels of seed have been divided into three portions, and Mr. Jackson now retains only about a third. Mr. Jackson agreed to give a third of the profits to Keil and another third to a man in Alabama who advanced the money to send Keil back to Africa. Some months ago Keil disappeared, and was last heard from in Alaska. Recently a man from Texas appeared with a claim for Keil's third, alleging that it had been transferred to him, and so a division was made. Mr. Jackson may sell out his holding in bulk or he may sell in small lots to individuals; but his friends are urging him to replant his entire lot of seed, so that a more thorough experiment may be made and a more convincing demonstration be given of the merits of a cotton which it is believed contains the possibilities of a boon to the South of incalculable value.





## FARMING IN THE SOUTH.

In answer to a request for a statement of farming conditions in their respective localities, and in refutation of certain statements made in an article by a Georgia newspaper writer published in the New York Independent, the following gentlemen sent to the "Southern States" letters, which were printed in the October number: Hon. Wm. C. Oates, governor of Alabama; Dr. Chas. W. Dabney, assistant secretary United States Department of Agriculture and president of the University of Tennessee; Hon. A. J. McLaurin, governor of Mississippi; Prof. R. J. Redding, director Georgia Experiment Station; Prof. S. M. Tracy, director Mississippi Experiment Station; Prof. R. L. Bennett, director Arkansas Experiment Station; Prof. J. H. Connell, director Texas Experiment Station; Dr. H. B. Battle, director North Carolina Experiment Station; Hon. W. G. Vincenheller, commissioner of mines, manufactures and agriculture of Arkansas; Mr. T. K. Bruner, secretary North Carolina Board of Agriculture; Mr. J. H. McCall, president Merchants and Farmers' Bank, Quitman, Ga.; Mr. S. H. Dent, president Eufaula National Bank, Eufaula, Ala.; Mr. H. N. Beam, president Bank of Beebe, Beebe, Ark.; Mr. George McDonald, president Bank of Cuthbert, Cuthbert, Ga.; Col. D. B. Dyer, Augusta, Ga., and others. Since the October number was published other letters have been received, and the essential parts of them are given below. If nothing else had been published these letters from Colonel Killebrew and Mr. Doddridge would furnish a complete and sufficient demonstration of the claim that the Southern farmer is, because of more favorable farming conditions, infinitely better off than his Northern prototype:

**From COL. J. B. KILLEBREW,  
In Charge of Immigration, Nashville,  
Chattanooga & St. Louis Railway,  
Nashville, Tenn.**

"The view of the cotton-growing districts of the South as taken by Mr. Wallace Putnam Reed, of Conyers, Ga., is exceedingly narrow. It applies only to a few cotton districts where the negro element predominates. In every portion of the South where there is a preponderance of white labor there is thrift and plenty, even in these times of financial depression. So far as Tennessee is concerned, there is no part of the Union where the agricultural population is so free from debt, or where the farmers produce such a diversity of paying crops. Below will be found the mortgage indebtedness of the leading agricultural States, North and South, as reported by the eleventh census, by which the readers of the "Southern States" will be able to see that the 'slaves of the mortgage' in the Northwestern States are vastly more to be commiserated than the 'slaves of King Cotton in the South:'

### NORTHERN STATES.

#### MICHIGAN.

Number of farms.....	172,344
Number of mortgages.....	144,023
Indebtedness .....	\$95,753,329

#### KANSAS.

Number of farms.....	166,617
Number of mortgages.....	203,306
Indebtedness .....	\$174,720,071

#### OHIO.

Number of farms.....	251,430
Number of mortgages.....	119,730
Indebtedness .....	\$134,107,706

#### PENNSYLVANIA.

Number of farms.....	211,557
Number of mortgages.....	140,127
Indebtedness .....	\$121,844,907

#### NEW YORK.

Number of farms.....	226,223
Number of mortgages.....	156,815
Indebtedness .....	\$217,813,055

#### ILLINOIS.

Number of farms.....	240,681
Number of mortgages.....	128,986
Indebtedness .....	\$165,289,112

## INDIANA.

Number of farms.....	198,167
Number of mortgages.....	106,155
Indebtedness .....	\$74,553,217

## SOUTHERN STATES.

## TENNESSEE.

Number of farms.....	174,412
Number of mortgages.....	17,196
Indebtedness .....	\$16,425,144

## GEORGIA.

Number of farms.....	171,071
Number of mortgages.....	34,731
Indebtedness .....	\$16,969,687

## KENTUCKY.

Number of farms.....	179,264
Number of mortgages.....	34,612
Indebtedness .....	\$23,779,911

## ALABAMA.

Number of farms.....	157,772
Number of mortgages.....	27,424
Indebtedness .....	\$28,762,387

## NORTH CAROLINA.

Number of farms.....	178,350
Number of mortgages.....	36,143
Indebtedness .....	\$14,537,449

## SOUTH CAROLINA.

Number of farms.....	115,008
Number of mortgages.....	19,900
Indebtedness .....	\$9,060,351

## LOUISIANA.

Number of farms.....	69,294
Number of mortgages.....	11,352
Indebtedness .....	\$15,750,153

"These mortgages are on acres, and not on town lots. At the present prices of wheat, oats, rye, barley, corn and potatoes it is simply impossible for the farmers of these Northern States ever to emancipate themselves from the thralldom of debt. 'When their Shylock creditors speak, they must obey.'

"The condition of servitude is far more applicable to the owners of these heavily-mortgaged farms in the Northwest than to the cotton-growers of the South.

"Mr. Reed says there is no market for the vegetables in a land where people raise their own supply. This is true, but there is a ready market for all early vegetables in the great cities of the Northwest. Does Mr. Reed know the fact that there are many counties in the old cotton-growing section of Tennessee in which the farmers devote their time almost exclusively to the growing of potatoes, tomatoes, strawberries, asparagus and other fruits and vegetables for the Northern markets?

"Such counties as Gibson, Crockett and Madison, in West Tennessee, and

Williamson and Maury, in middle Tennessee. If Mr. Reed will visit these former cotton-growing districts in May and June he will see hundreds of carloads of berries and vegetables sent out every week to Chicago, Cleveland, Pittsburg and other places north of the Ohio river. He will be able to see in the region around Humboldt as much as 100 acres oftentimes in a single strawberry field. In Maury county and Lincoln county there are many fields in Irish potatoes containing from thirty to 400 acres. Nor will Mr. Reed fail, if he makes inquiries, to find many thrifty Northern men among the cultivators and managers of these fruit and vegetable farms.

"The very beginning of the cultivation of Irish potatoes for the Northern markets was made by Mr. Clawson, from Ohio. He afterwards rented the old Polk county farm in Maury county, agreeing to pay therefor a rental of \$5000 annually. The first year he planted 400 acres in potatoes. These he marketed in early June. He took the small unmarketable potatoes, and after exposing them for a few weeks to the action of the atmosphere, he planted them on the same 400 acres for a second crop. This last crop was harvested in October. Now for the results: He sold the two crops for \$53,000, and after paying his rent, paying for his labor, seed, transportation and commissions he had remaining \$17,000.

"Mr. Reed, so far as the cotton-growing districts of Tennessee are concerned, betrays a woful lack of information. The most prosperous farmers in the State are industrious Northern men who have taken their old worn-out cotton plantations and restored them by judicious culture, abundant fertilization and a proper rotation of crops to their pristine fruitfulness.

"Reference may be made to Belvidere, in Franklin county, Tennessee; to the many Northern farmers who have settled around McMinnville, Tenn., and around Huntsville, Ala., and to those who are now making the old cotton district about Somerville,



in Western Tennessee, blossom as the rose.

"I am at a loss to know how Mr. Reed reaches the conclusion that if a farmer grows vegetables or fruits he cannot sell them. Is Mr. Reed ignorant of the fact that thousands of carloads of melons, fruits and vegetables are shipped annually from Georgia and Florida to the Northern States? The Nashville, Chattanooga & St. Louis Railway during the fiscal year ending June 30, 1896, hauled over 2800 cars of fruits and vegetables northward, with an average of twenty tons to the car. This probably embraced less than one-fourth of the quantity hauled by the railroads in the Mississippi valley alone, without reckoning the quantity sent by the ocean steamers and by the railroads of the Atlantic coast States. Does Mr. Reed not know that the pineapples, oranges and lemons that supply the Northern States are shipped from Florida, in the very edge of the cotton belt? Has he ever inquired from railroad officials how many carloads of peaches are sent annually from Georgia to consumers North, fully a month in advance of those maturing in New Jersey? Does Mr. Reed not know that wheat brings higher prices in Nashville seven months in the year than it does in Chicago, and nearly twice as much as it does in the Dakotas? The reason of this is plain. The South does not produce wheat enough to supply its demand, and flour or wheat must be brought in from Chicago or Milwaukee. It follows, therefore, that the prices paid for wheat are Chicago prices, with the freight added. The prices paid farmers in the Northwest are Chicago prices, with the freight taken off. There were hundreds of men from the Northwest in my office last spring and summer, to whom the knowledge of this fact was for the first time brought. When wheat was selling actively in Nashville for seventy-three cents per bushel it was worth sixty cents in Chicago and forty-seven cents in Dakota.

"This condition of things does not hold true for the months beginning in

July and ending usually in December, after which date the millers of the South have to look to Northern markets for supplies of wheat when the home supply is partially exhausted. At this writing, September 30, wheat is worth from four to five cents a bushel more in Nashville than in Chicago, and the gap will widen as the season advances.

"I cannot believe that Mr. Reed has kept pace with the recent progress of events. Eastern North Carolina, around Wilson, Rocky Mount and Tarboro has been almost transformed from a cotton-growing district to one in which the finest yellow tobacco is produced, and where peanuts and vegetables are largely grown. Within two or three years, under the inspiration of intelligent thinking farmers and through their influence and example six or seven counties lying between Columbia, the capital of South Carolina, and the coast have to a large extent abandoned cotton culture and are now producing some of the finest tobacco in the world. Darlington and Sumter, Florence and Marion have sprung up into manly vigor and are now exhibiting an enterprise that would be creditable to any towns of a like population anywhere in America.

"Mr. Reed must visit these old cotton-producing districts and learn that there is no necessity for seeking 'the wisdom and experience of our clearest-headed statesman, economists, business men,' but simply to follow what is being done in other places in the South where men think and act with a just regard to the necessities of the times. Mr. Reed's mistake is in assuming that all the cotton districts in the South are correctly represented by the cotton districts in central Georgia.

"The increase in the production of corn, wheat and tobacco since 1889 in the following cotton-growing States tells its own story:

	1889.	1895.
North Carolina.....	25,783,623	29,466,180
South Carolina.....	13,770,417	18,272,120
Georgia.....	29,261,422	38,377,430
Florida.....	3,701,264	5,506,430
Alabama.....	30,072,161	36,388,320
Mississippi.....	26,148,144	32,379,300
Louisiana.....	13,081,954	18,902,160
Texas.....	69,112,150	99,273,320
Arkansas.....	33,982,318	43,813,200
Tennessee.....	69,635,350	80,639,010



"These ten States produced 314,548,804 bushels of corn in 1889, as against 402,907,610 in 1895. This is a gain of nearly 30 per cent.

"In the production of wheat, North Carolina, South Carolina, Georgia, Alabama, Mississippi and Arkansas show decided gains in comparing the census year of 1889 with the year 1895. The crops in Tennessee and Texas were not so large, owing to the partial failure caused by bad seasons and rust, but the increase in the other cotton States averaged fully 20 per cent., some of them even doubling their production.

"The growth of tobacco in the cotton-growing States has been widely extended, as is shown by the following table:

	1889.	1895.
North Carolina.....	36,375,258	114,525,000
South Carolina.....	222,898	5,000,000
Tennessee .....	36,368,395	43,220,000
Total .....	72,966,551	162,745,000

"This shows a gain of over 100 per cent. in six years.

"In central South Carolina they are now singing:

"Cotton was once a mighty King,  
And produced Carolina's cracker;  
But now we have a better thing,  
The glorious bright tobacco."

"The farmers of the South would surely not increase these crops if there were no demand for them, and no profit in growing them.

"Nor is this diversification of crops likely soon to be arrested in the cotton-growing districts of the South. During the past two years the agricultural experimental station of Louisiana has demonstrated that in the northern tier of counties in that State as fine yellow tobacco may be grown as in the best tobacco districts of Virginia or the Carolinas. And the same is true of the whitish lands in Tennessee around Tullahoma, where the handsomest yellow tobacco was grown this year by Mr. Aydelotte. No crop grown in the United States requires a higher degree of intelligence to manage successfully than that of yellow tobacco, nor is there any other crop more profitable. It is a crop that suits the intelligent laborer from the

North. Thousands of happy homes will soon be established in the cotton belt, where white men will grow crops that will command, as they now command, the largest and best prices paid for any agricultural products in the United States.

"Mr. Reed says if a tenant farmer in the South gets \$200 a year out of his work he is doing well. 'Of course,' he says, 'he gets a home rent free and raises a part of his food supply.' Mr. Reed would not have penned this sentence if he had known the destitute condition of many of the farmers of the great Northwest. I have seen hundreds of farmers in South Dakota and in central Michigan who own their farms that do not now sell \$100 worth of produce a year. Indeed, in a canvass I made through a portion of Michigan, where I met the most intelligent workers of the soil I have ever seen, I found very few of them who sold \$100 worth of produce besides keeping a bare supply on hand for home consumption. If Mr. Reed desires I will send him abundant proofs of these assertions. Oats at fifteen cents per bushel, wheat at forty cents per bushel and potatoes at ten cents per bushel do not yield \$100 very quickly.

"These farmers are coming South because they can improve their condition. They will have no severely cold weather to provide against. They will have earlier crops, and therefore better markets. They will be able to buy farms as good as those they leave for one-half the money invested in them, and, above all, they will be able to relieve themselves of the great burthens of mortgage indebtedness beneath which they 'bend their backs' and waste their energies and consume their lives in a fruitless attempt to accomplish the impossible.

"I have before me now a letter from T. D. Arden, of West Branch, Mich., in which he says: 'A farmer owning forty acres of land in my county (Ogemaw) cannot, at present prices, make a support from his land.' 'Nine farms out of ten,' he says, 'are mortgaged, and the farmers cannot pay taxes and



interest on the mortgages, work as hard as they may. A farmer owning forty acres does exceedingly well if he handles \$100 during the year.'

"And this in a climate where heavy and expensive clothing must be worn in the winter, and where the severity of the weather prevents anyone from doing outdoor work for two or three months in the year.

"Mr. Arden further says: 'Every farmer in my neighborhood wants to sell and get away. Southern vegetables and fruits have ruined our market for these products. We cannot compete with a region that can grow two crops of potatoes in one year on the same land, and where the farmer can live one-third cheaper than he can in Michigan.

"And what Mr. Arden says is substantiated by hundreds of others who are now moving to the South. Whatever may be the outlook in middle Georgia, and however poor the opportunities for Northern settlers may be in that cotton-growing district, it is not true that the cotton-growing districts of Tennessee and Northern Alabama are unfit and unsuited for Northern settlers. On the contrary, after the study of every part of the United States and Canada, I know of no spot where an intelligent and energetic farmer can reap a richer reward for his labor than in Tennessee and Northern Alabama."

**From W. B. DODDRIDGE,  
Gen. Man. Missouri Pacific Railroad Co.  
St. Louis, Mo.**

"The article published in the New York Independent states, without proving it in any way, that the Southern farmer is a slave, meaning doubtless that he is so deeply in debt he can never pay out.

"A reference to Volume I of 'Preliminary Results of the Eleventh Census Bulletins,' published by the United States government, will effectually refute this inference so far as Arkansas is concerned, to which State I shall confine my remarks, as it is the State through which the St. Louis, Iron Mountain & Southern Railway passes,

which is a part of the railroad system with which I have the honor of being connected, and the State whose resources and financial position I am naturally better acquainted with than those of any other Southern locality.

"In the volume referred to above, under the head of 'Statistics of Farms, Homes and Mortgages,' the per capita indebtedness in Arkansas is given as \$13, while that in Northern States is as follows: Illinois, \$100; Indiana, \$51; Iowa, \$104; Kansas, \$176; Colorado, \$206; Connecticut, \$107; Massachusetts, \$144; Minnesota, \$152; Wisconsin, \$72; Nebraska, \$126; New York, \$268. These figures ought to settle the question of 'slavery' under indebtedness as far as the State of Arkansas is concerned.

"It is a fact well known and often spoken of among business men at the South, that what are known as crop mortgages are not given now to anything like the extent they were a few years ago; the low price of cotton the past few years having been a blessing in disguise, as this product, when it went down to four and one-half to five cents per pound, was no longer good security for the supplies which the merchant had been in the habit of furnishing. Credit being therefore refused, products have been diversified and farmers and planters have made their crops upon their own supplies, raising their own bread, meat and fodder.

"The writer, in the article referred to, also intimates that cotton is the only crop suited to the South, and that there is no market for any other product. These are most certainly erroneous positions.

"The Year Book of the Department of Agriculture of the United States for the year 1894 gives in a table the prices of corn, wheat and hay in the different States in the years 1890, 1891, 1892, 1893 and 1894, by examination of which we find the average prices of these products for these years in Arkansas were as follows:

	Corn. Per bus.	Wheat. Per bus.	Hay. Per ton.
Arkansas .....	50 cents.	77 cents.	\$9 56
Kansas .....	38 cents.	57 cents.	4 68



"These three products can be grown as profitably in Arkansas as in any Northern State, the average yield of corn per acre in Arkansas being twenty-two bushels, and in Kansas twenty-six, these figures being taken from the 'Statistical Abstract of the United States' for the year 1891 (other years showing corresponding results), published by the government, the difference in modes of farming North and South being undoubtedly responsible for the slight difference of product per acre, while the better price obtained in Arkansas, as given above, more than makes this even.

"To show more conclusively the position Arkansas occupies agriculturally, as compared with Northern States, some figures from the census of 1890 are pertinent. I find here the average cash value per acre of all crops taken together in Arkansas to be \$9.70; Kansas, \$4.26; Indiana, \$6.27; Illinois, \$7.19, etc.

"Another statement made by the correspondent of the New York Independent is, that 'there is not an instance on record of a Northern farmer who has prospered to any great extent in the South since the war.' In refutation of this, I beg leave to offer the following authentic testimony; it speaks for itself:

"'Carlisle, Ark., Sept. 2, 1895.

"W. P. Fletcher, Esq., Lonoke, Ark.:

"'Dear Sir—In answer to your letter of late date, I will say that I take pleasure in complying with your request. I was born in Illinois, raised in eastern central Kansas, came to Arkansas thirteen years ago with nothing. After being here three years I bought a piece of raw prairie land, 120 acres, situated on Prairie Longue, two and one-half miles south of Carlisle. I gave my notes for the sum of \$800, not being able to make a cash payment. I had a team and three cows. I am now entirely out of debt. I have a good home. I have three good barns; am now building a new residence. I have fifty head of cattle, five head of horses and mules; have a good orchard, and my farm otherwise fairly well improved. My principal crops

are oats, corn, potatoes and stock peas. I am engaged in raising fine hogs, having thoroughbred Poland China. My hogs are doing well, and I have sold a great many spring pigs this year at from \$6 to \$10 per head. I milk an average of twenty head of cows, and patronize the creamery at Carlisle. My income from the milk sold to the creamery is about \$600 per year. The milk is separated at the creamery, and I get the skim milk for my hogs and calves. I winter my milk cows on stock peas, which I raise on my farm, and it is the best milk producer of any food I know of. There is also no better feed for horses and mules.

"'Politically I am a republican. Lonoke county is democratic. I always go to the election, say what I please and vote as I please. My right to do so has never been questioned, and I never had better friends than my democratic friends. Myself and my family have good health. I am here to stay, and my farm is not for sale.

"'Yours truly,

"' (Signed), D. B. PERKINS.'

"John G. Zimmerman says:

"'I live on Grand Prairie, north of Carlisle. I am a German. I came here from New York thirteen years ago. I had one cow and a little money. I now own 560 acres of land on Grand Prairie; have it nearly all paid out. I have sixty head of cattle and plenty of work horses and hogs. I have made good crops. Irish potatoes have been a specialty with me; I keep them all winter, in heaps on the ground where I raise them, covered with hay and earth. The climate is fine; health is good.'

"I ask your indulgence in presenting the testimony of another Arkansas witness, as it is by such testimony that erroneous assertions can be refuted. It is in the form of a published interview with Mr. Shultz, of the firm of Shultz & Farris, of Clarksville, Ark., and is as follows:

"'From what State did you emigrate, Mr. Shultz?'

"'From Ohio. I took up a homestead in the fall of 1877, and all the



means and personal property I then had was \$15 in cash, an axe, a maul and a wedge. There were some improvements upon the land, and I bought out a previous claimant, agreeing to give him \$170 for his claim.'

"Were there any fruit trees on the place when you bought the claim?"

"A few seedling apples and peach trees; probably twenty apple and fifty peach trees. Now there are about 1500 choice grafted apple and 500 budded peach trees.'

"What was the cost of trees and of clearing of land and planting per acre?"

"One-year-old trees from graft cost from \$40 to \$50 per thousand. Clearing of land and planting trees \$10 per acre. From this should be deducted the value of the timber, as most of our lands are covered with fine timber. Near this land of mine there is now a spoke and felloe factory doing a large business and buying readily all available hardwood.'

"What is the present value of your property?"

"My farm is worth \$2500, and besides this have bought forty acres more of valuable land, which I still own; a half-interest in a grocery store (house and lots) in Clarksville, worth \$1000, all the result of my first investment, and not coming from outside sources or inheritance, and all are paid for.'

"What is the present annual value of the fruit and other products of this farm?"

"Over \$500, besides a good living, but with new trees just coming into bearing the value will be doubled.'

"Such testimony as this, of farmers who have gone from the North, settled and made money in the South, could be presented in overwhelming number, completely refuting the statements of the New York Independent's correspondent, but I have not time or room to quote it here.

"In looking up the data of the agricultural resources of the South, I find that cotton, although it undoubtedly is not a good crop to depend on exclusively (and probably the same is true

of any other product North or South), is a factor of value that should not be overlooked. The crop of this staple raised in Arkansas in 1890 sold for about \$28,000,000, while the product of all the gold mines of the United States for that year was but \$32,845,000. Cotton, if raised and handled as a surplus, or added cash crop, bread, meat and hay being grown by the farmer to make it on, brings a large amount of money (when sold at an average price) into the South, say, from \$200,000,000 to \$300,000,000 per annum.

"The South is a fruitful land, and offers to the immigrant farmer superb advantages in the raising of cotton, corn, wheat, upland rice, hay, sorghum, fine fruit, tobacco, sweet and Irish potatoes, peanuts, poultry, cattle, hogs, etc., together with as good, if not better, markets for all products than those of the North, a genial climate, cheap lands, good water, a hospitable and law-abiding native people and good religious and common school privileges. There is no doubt but that the immigration which for the past ten years has been setting southwards will continue.

"The country, as a general proposition, is healthful, provided ordinary precautions are taken against the only climatic disease which prevails in all newly-settled countries—malaria. Within the recollection of the writer, the State of Indiana, Southern Illinois and portions of Missouri have had the same disease to contend with, which, with the settlement of those sections, the clearing of lands, improved habits brought about by civilizing influences, proper drainage, etc., has disappeared. The same result will obtain South in the Mississippi valley with the improvement of conditions naturally taking place as the people become better off."

**FROM JOSEPH F. JOHNSTON,  
Ex-Prest. Alabama National Bank, and  
Governor-Elect of Alabama,  
Birmingham, Ala.**

"It seems to be the fashion of small minds to misrepresent the South.



None of us here claim that everything is exactly as it should be; thus we are not prepared to say that all of our people are honest, law-abiding and prosperous. We know that there are many things that should be improved, but answering the declaration recently given to the world by a writer in a Northern periodical, that the cotton-planters of the South are owned by the country merchants, and that Northern men coming into this region soon 'sink to this level of serfdom,' I desire to say that these statements are untrue. It is true that the farmers of Alabama have not been prosperous for a number of years, but I believe they have felt the depression less than the farmers of the North and West. A careful study of the condition of the farmers of Alabama convinces me that they owe less money now than for many years past, and are the freest and most self-reliant and independent of all their brethren in the United States. A few years since corn was brought into Alabama from the West by the trainload, and nine-tenths of the meat consumed was from the Western hog. For the past few years we have sent out of Alabama as much corn as we have brought in, and the importation of meat from the West has declined fully 66 per cent. The farmers are raising their own corn and meat, and becoming more and more independent of the West and the merchant. In the cotton belt, with average seasons, the fertile lands there will produce forty to fifty bushels of corn to the acre and about one-half a bale of cotton, and this without fertilizing. These same lands will yield enormous returns in sweet potatoes, peas, turnips and other small crops. We have but limited home markets for any of these crops except cotton. Even at fifty bushels of corn per acre, experience has taught our people that there is no money in raising corn, so our cotton-planters usually from choice raise only enough corn for their home use, and make cotton their surplus and money-producing crop.

"One trouble that Northern men have had in settling here is that they

often come with the idea that our people are ignorant and unprogressive, and they set out with new methods, and often pay pretty well for their experiments.

"There is not a State or section in our Union where the land responds more generously to the efforts of the farmer than in Alabama; there is not one where the value of land in money for its quality is so low; there is not one where climate and soil offer more generous inducements to men of push and energy, and there is not one where men sooner reach the level of their real worth and are esteemed accordingly. We have prosperous colonies of Germans in three sections of Alabama. Instead of being serfs, they are constantly adding to their numbers by drawing from the North and West, and they are highly esteemed by all our people, and delighted with their new homes in a State where men can labor in their shirt sleeves ten months in the year."

**From J. W. ALLEN,  
President of the Bank of Edna,  
Edna, Texas.**

"Yours of the 22d inst.; making inquiries as to the condition of the farmers of this, Jackson county, has been duly received and contents noted. In my judgment the farmers, proper, are our most contented and independent citizens. They own their own comfortable homes and lands, and I know of no farmer, whether native, Northern or foreign born, who is reduced to 'serfdom,' or who is held in 'perpetual debt bondage' by the merchant. The farmer who does not thrive and prosper in a country like this, so highly endowed in natural resources, can trace his failure to his own mismanagement. The soil is notably rich and productive, and with proper cultivation it will invariably reward the faithful tiller with an abundant yield. The climate is mild and healthful, and farm or outdoor work proceeds throughout the entire winter. On the same farm can be raised successfully and at small cost, corn, cotton, peas, potatoes, sugarcane, oats, rye, millet, various fruits



and vegetables, poultry, milk, butter, eggs, bacon, beef, lard, etc. With all these commodities, which can be produced so cheaply, there is no reason why the farmer should become the 'serf' of the merchant. On the contrary, the merchant courts the patronage of the industrious farmer who utilizes all these valuable resources which make heavy grocery bills unnecessary.

Our cotton crop this season is fine, and good prices are being realized. A good and friendly feeling prevails among all classes and in all channels of industry and business. We recognize the fact that it is our common country, and that there is a mutual dependence one upon the other for general prosperity."

## FLORIDA'S INDIANS.

*By Owens C. Quarterman.*

Although much has been written about the Seminole Indians, yet very little that is reliable can be regarded as throwing much light on the manners and customs of this curious tribe.

The word Seminole means refugees. The Creeks were refugees from various tribes of the Union, and the Seminoles are refugees from the Creeks.

At the battle of the Horseshoe, a peninsula in the Tallapoosa river, in 1814, Andrew Jackson defeated Weathersford, the principal Creek chief, and after his surrender most of the Indians were sent to the western part of the United States. Some of them came to Florida and settled in the Everglades, a region that was at that time practically unknown to the whites.

Gen. Wiley Thompson was sent to Florida in 1834 by President Jackson to have a treaty of removal signed by the red men. General Thompson anticipated no trouble in having the treaty signed, but an interview with Osceola, the favorite chief of the Seminoles, proved to him that the red men were unwilling to abandon their homes. General Thompson's views did not coincide with those of the chief, and the latter was cast into prison and fettered. Late in the afternoon of the same day Osceola agreed to sign the treaty of removal, and he was released from custody. He had, however, ap-

prised the General that he would avenge the indignity of his incarceration at the first opportunity.

General Thompson was near Ocala, inspecting a fort. Osceola and a few of his followers, hearing of the General's whereabouts, concealed themselves in a thicket by the roadside, and as the former rode by them his body was riddled with the bullets of the red men. The rejoicing of Osceola and his warriors over their victory could be heard for miles around. The garrison remained within the fort, for all of the Indians in the vicinity seemed to have congregated for a purpose not a great way off.

Several years afterward Osceola was captured and placed in prison at Fort Moultrie, S. C., where he died within a short time of throat trouble.

After the war with Osceola, a treaty was made with the Indians, by which the whites agreed to concede to them all of the territory south of a line drawn from Lake Harney to Tampa. The Indians have lived in this part of the State ever since, preserving their tribal laws and organization and brooding over the wrongs that they have suffered at the hands of the whites. Many encroachments have been made upon the territory of the red men within the past five or six years by the railroad along the east coast, by Disston's land operations in the interior of the peninsula and by



many settlements along the Gulf coast from Tampa to the Ten Thousand Islands.

The Everglades is a low, marshy tract of land, and at certain seasons of the year much of it is submerged. In this swampy region are found a few acres, here and there, widely separated, that are free from the annual overflow. Only a few spots are suitable for cultivation and settlement. About 500 Indians now live within this restricted area. They refuse to hold land under a State title. They do not incline to our government or institutions.

The Seminoles are divided into clans. Each clan is ruled by a government of its own. A central government, which only the chief can assemble, rules the entire nation.

The statement, which has repeatedly been made, that the Seminoles are governed by a chief, who has authority over the whole nation, is not correct. In time of war Tom Tigertail is commander-in-chief. Jumper governs the religious duties of the nation. The peace chief is furnished by the family of the Snake, and is a descendant of the family of Billy Bowlegs.

Tom Tigertail subscribes to many leading newspapers and magazines. He reads the English language fluently. He has more influence over the Seminoles than have any of his fellow-chieftains. He is the wealthiest farmer and stock-owner.

Live stock is not owned in common, but if an Indian so desires he is permitted to kill for family use any beast that he may find.

The ruling families of the Seminoles are descended from those who governed the Creeks. Of these, the family of the Wind is still pre-eminent, and is granted special privileges. The old traditions and ceremonies, which in many respects were so peculiar as to mark out the Creeks as a nation separate in origin from the other tribes who once roamed over the territory of the United States, are still maintained.

The Seminoles of today possess a

long series of picture writings, painted on the skins of wild animals. These skins are of different colors. From these records the old men read the history of their nation back to a period of great antiquity. At some time very remote, according to these curious data, the Muscogees were a tribe that inhabited the mountains of the West, and obtained their independence from a nation of powerful neighbors who dwelt in stone houses on a lake. Still nearer to them was another tribe, which has been identified by Pickett as that of the Alabamas. These records also afford evidence that the Muscogees, with an army of strangers, frequently attacked a great city situated on a lake and finally destroyed it; that after its destruction the strangers attempted to make slaves of the Muscogees; that a war ensued as a consequence between the Muscogees and the strangers; that after the war the Indians deserted their homes and spent twelve years in wandering eastward; that during this time many battles were fought, the tribes having followed the Alabamas till they reached the settlements where we found them; that after the Creeks had settled in Georgia they continued to make war against the Alabamas, Chickasaws and Choctaws, and were joined by the Yamassees, Tuscaroras and other fugitive tribes that had been driven out of Virginia and the Carolinas.

The houses of the red men are of peculiar construction. Four posts are placed in the ground, with crossbeams extending from one to another. The flooring, several feet from the ground, is composed of the skins of wild animals stretched across poles, which are laid lengthwise. The roofing is made of palmetto leaves. The structure is waterproof. During the wet season the cooking is done on a pile of clay, several feet square, in the centre of the floor. The gathering of the Seminoles around their camp-fire in the evenings is a very interesting sight.

The women do all of the farming and the men are huntsmen. Most of



them live solely on the money that they receive from the sale of skins and plumes.

The burial ceremonies of the Indians are different from those of any other race. On the surface of the ground a site several feet square is leveled off with a hoe and a pen is built. Small poles are placed at the bottom. As the pen increases in height larger poles are laid. The corpse is placed in the pen with the head toward the east. After a brief ceremony by Jumper, the high priest, the pen is filled in with earth to the depth of several feet and then layers of rock. The rock is intended to prevent wild animals from digging into the pen and disturbing the sleeper.

Tom Tigertail's mother had been an invalid for a number of years from the effects of rheumatism. She was confined to her bed for many years, and at her death she was 100 years old. She was so distorted by the disease that she was no larger than an ordinary child when she died. Before her death she gave an old negro slave directions as to how she wished to be buried. On the execution of her orders he was to be set free. After death the tribe was to take her to the big cypress at the north end of the Alpatti flats. The negro was to hew out a space sufficiently large for her body and such utensils as she would need in the next world. The opening was to be securely fastened up. After the corpse had been placed into the wooden grave the red men were to decorate the spot with pieces of their hair. The supposition was that this would keep away evil spirits. The grave was to be fastened up with spikes. All of this was done. The spikes at the grave are visible at the present day. The warrior's mother thought that if she should be buried in this tree she would be able to see the whites if they should come to take the land from the red men.

After the slave had fulfilled his mission, Tom Tigertail set him free, as his owner had requested. The negro asked that his sister, who was Tom

Tigertail's slave, should also be set at liberty. This request Tom Tigertail refused to grant, and told the negro to leave the village. The latter refused to do so unless his sister should also be set free.

The men had all gone hunting on a fine August morning and the women were at work in the fields. In the middle of the day the negro came into the village and tried to take his sister by force. During the struggle he killed her child by striking it on the head with the barrel of his gun. Several children ran to the field for the women, who hastened immediately to the scene. A struggle ensued and several Indians were killed.

After the tragedy the negro retired to an oak thicket in the rear of the village. The sun was sinking to rest when the men, returning from the day's hunt, were informed of the news. Scar at once set out to look for the negro. He was found sitting on a log at the farther end of the thicket. Scar fired. The ball entered the negro's left shoulder. As he attempted to rise, Scar fired again. The slave was shot through the heart. Tom Tigertail ordered an old countryman, who was in the village trading with the Indians, to carry the corpse to the woods. The countryman tied one end of a rope around the negro's neck and attached the other end of it to his ox-cart. The body was thus dragged several miles.

A few months elapsed, and the Indians conceived the idea that the negro's spirit still lurked in the village. They fancied that they could see it leap a hundred yards at a bound, a flame of red spouting from the nose and a flame of blue from the mouth. This report was soon promulgated over the neighborhood, and Jumper, the high priest, was sent for to lay the spirit. He caused a white dog, a rattlesnake and two cats to be incinerated. He sprinkled the bones of the slave with the ashes and allowed both to remain till the following day, when he burned the bones also. All of the ashes were then floated down to the Wewa Ojus on running water.



Mr. W. T. Johnson several years ago came from one of the Northern cities for a season of hunting and fishing. On his arrival at Jacksonville he was advised to go to the Everglades; also to engage an Indian as a guide. Mr. Johnson left Jacksonville early in the fall. He visited several places on the way, and reached an Indian village in about four weeks. He engaged for a month, for \$25, one of Tiger-tail's cousins as a guide. The latter required and was paid the stipulated amount in advance. They set out in the early part of October.

Mr. Johnson, with his guide, reached safely the favorite hunting and fishing grounds of the Indians. The red man did everything that lay in his power to add to the pleasure of the white man, though the former did not take kindly to the latter. The month passed very pleasantly for Mr. Johnson till the month was up. The Indian had counted the days as they went by, and on the morning of the last day he left camp about 4 o'clock without giving any intimation of such intention. When Mr. Johnson awoke and found no Indian, he surmised that the red man had gone to the village for supplies. When the day was far

advanced and no red man appeared, the white man could not but realize that he had been abandoned by his guide. He meditated on the situation. He recalled to mind that he engaged the Indian for a month. The Indian had been with him for a month. He had not said anything to the Indian about remaining any longer. Perhaps he had gone away with the impression that his services were no longer required. These cogitations proved to be correct.

On the following morning Mr. Johnson departed bright and early in the Indian's canoe. He pulled up and down various streams, and during the day found himself back at the starting-point. He paddled about in the Everglades for four days without so much as a prospect of finding the way out. He decided to leave the canoe and try to walk out. He got lost in the dense swamps, and was on the verge of starvation when he was found by several cowboys so weak from hunger that he could not utter a word. The young men took him to their camp and cared for him till he recovered, when he left for the North. The Indians say that he has not been seen there since.





# THE SOUTHERN STATES.

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## THE SOUTHERN STATES.

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WILLIAM H. EDMONDS,

Editor and Manager.

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BALTIMORE, NOVEMBER, 1896.

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The SOUTHERN STATES is an exponent of the Immigration and Real Estate Interests and general advancement of the South, and a journal of accurate and comprehensive information about Southern resources and progress.

Its purpose is to set forth accurately and conservatively from month to month the reasons why the South is, for the farmer, the settler, the home seeker, the investor, incomparably the most attractive section of this country.

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### That African Cotton in Georgia.

The newspapers of Atlanta, Ga., published lately a startling story about a farmer in Georgia who had come into possession of some cottonseed brought from Africa, from which he had grown a remarkable cotton, the plant being several feet higher and the yield of cotton per acre being several times greater than anything ever known before. It was a part of the story that a number of farmers had sent a representative to offer the owner of the new cotton \$18,000 for all the seed he had, their purpose being to destroy it and thus prevent the rapid expansion in cotton production that would follow the general introduction of this wonderfully prolific variety.

While the \$18,000 story seemed questionable, the reports as to the cotton itself

seemed to justify an investigation, and the "Southern States" at once sent a competent and trustworthy representative to get at the facts in the case. His report will be found elsewhere in this number.

The papers have not seemed to attach much importance to the newly-discovered cotton. The Industrial Record, of Boston, says:

"We give simply a brief synopsis of the story for the purpose of saying that the seed purports to have been received from Africa. It, no doubt, in our mind, refers to a growth of cotton familiar to Egyptian soil, known as the Bamian variety. This cotton was discovered not many years ago, i. e., within the last twelve or fifteen years, and some of the seeds were sent to the Department of Agriculture, a portion of them being secured by the editor of this journal and sent to a Texas plantation, with the result of their giving a fair yield of lint per acre (about one and one-half bales), but there was a deterioration in the character and length of the fibre in the first year's planting, and the second year's planting proved a failure. We shall know more about this story, we trust, within a short time."

The News and Courier, of Charleston, quotes this, and grows very merry over it, as follows:

"This is about what we suspected. The cotton in question, after all the hurrah made over it by the Atlanta papers, is the familiar Bamian cotton, and yields only a bale and one-half the first year, and peters out the second year. It was tried in Texas before it was tried near Atlanta, and nothing was said about it. The Atlanta papers are forever making themselves ridiculous about trifles, and it appears that they will never learn to be dignified and moderate in what they say. We do hope that they will learn a lesson from their experience in this matter, however, and will take their agricultural news hereafter, as they take



their opinions on different questions, from the News and Courier.

"As for the Georgia farmer who refused \$18,000 for his cartload of cottonseed, he has, of course, our profoundest sympathy."

All of which is very funny, but nothing more. We doubt if the writer of it ever before heard of "the familiar Bamian cotton" that he talks about so glibly. The editor of the Industrial Record merely surmises that the cotton may be of that variety and identical with the seed he sent to Texas for trial. Whether it is or not, or whether the new cotton will sustain the claims that are made for it, cannot be determined "until," as Mr. Phenix says, "it is scientifically investigated and given the benefit of extensive cultivation throughout a number of seasons in various places, and its progress from germination to maturity and then to the loom has been carefully noted by a number of authorities."

#### **Superior Southern Meats.**

According to the New York Sun, the principal hotels and restaurants which make a specialty of serving fine hams and bacon secure the Southern products whenever possible. The demand for them is so great that it is stated orders are often placed a year in advance. In spite of the fact that the Chicago and Western packers of provisions have increased their output enormously, they cannot equal the quality

cured in the South, and it is doubtful if they can ever obtain the high-class trade enjoyed by the Southern meat-curers owing to the uncertain quality of commercial pork products. "While many pieces of a particular brand," says the Sun, "may leave little to be desired, large production is a bar to uniformity of excellence. Thus there arises an element of uncertainty that is abhorrent and tormenting to the epicure. No such disgusting element is possible where supplies are obtained from special growers in the Southern States. The superiority of smoked hog products there is due to the rearing, feeding and curing of the animals. No particular attention is given to choice of breeds, but from birth the pigs have an extensive range, where they find an abundance of nuts and succulent roots upon which they feed until collected in enclosures, when corn is given them until they are killed, and this plan is considered more than an equivalent of selection in breeding. The meat is dry-cured, according to a formula that produces invariable results. It is smoked with hickory wood, and this most important process is carefully conducted, so that it may cease at the exact moment when penultimate perfection is attained. The outcome is that every piece of meat subjected to this careful treatment is of uniform merit."



# GENERAL NOTES.

## Dairying Around New Orleans.

A correspondent of the American Dairyman, New York, writes as follows of the dairy business in the country tributary to New Orleans:

"I will not longer dwell upon these, except to say that at one station (Crystal Springs, Miss.) there have been sent on one day nearly fifty carloads of tomatoes, while the number of carloads of cabbage, radish, beets, carrots, eggplants, lettuce, cantaloupes, what-not, almost surpasses belief. And several other stations send immense quantities of early fruits and vegetables North and West.

"But it is to the dairying interests that I would especially direct the attention of your readers in this letter.

"As yet, it is only in the stage of successful initiation. To send milk and cream to New Orleans from that area as a business was utterly unknown until a year or two ago. It originated then by a company purchasing a large herd of Jerseys from Mr. E. F. Herwig, of Arcola, La., and establishing a sales agency in this city. Since then, three other companies have been organized in this city and have herds of Jerseys in the pine woods aforesaid and ship their cream and milk here.

"The business of delivery of sealed bottles is growing here. We are getting pure milk and cream. We can get the former now at thirty cents per gallon, and cream at twenty cents per pint. But a little while ago you could get nothing but watered milk at forty cents a gallon—the product from the (generally) filthy dairies of this city. And the late Col. W. A. Stuart, of Ocean Springs, Miss., used to get for his Jersey cream \$1.25 per pint, with a most meagre supply. This competition of these pine woods dairies has already been of unspeakable value in improving the character of the supply from the city dairies. A rigid inspection has been inaugurated. Prices have been reduced; watered milk has almost totally disappeared; greater clean-

ness prevails in dairy environment and conduct.

"Although this pine woods dairying is in its infancy, it is easy to foresee that it is destined to be an affair of great magnitude. I was surprised to see the number of milk cans piled about the several depots. Several persons separate their cream by separators and ship it to New Orleans. There are probably at least a thousand Jerseys in the various pine woods dairies, and this breed of cattle and its high grade are the predominant factors in bovines there. I was amazed at their abundance. I actually saw two bulls yoked together in one little village doing service in a wagon. One can buy a good thoroughbred Jersey cow almost anywhere there for \$50, and bull calves are sold to the butchers for veal. At almost any hotel one can get (even in little villages) delicious Jersey butter, milk and cream. A few years ago one would find only rancid imported butter at the leading hotels of the principal towns, and fresh milk was unobtainable, except to put in coffee or tea, and a guest would have been deemed presumptuous who asked for a glass of sweet milk at first-class hotels. Any Jersey bull calf eligible to registration brought \$100, and was ready sale at that price. A half-breed Jersey cow was worth \$100 and above. A registered Jersey cow, cheap at \$500.

"I knew a great Jersey breeder in East Mississippi who paid about \$3000 for a half-dozen or more Jerseys about twenty years ago, and was thought to be 'daft' by his neighbors. But he became rich and famous. I am certain that, in 1878, when I went on the Mobile & Ohio Railroad to develop the live stock, dairying and grass-raising interests there, there were not 100 registered Jersey cattle in the State of Mississippi. Now I doubt if there are less than 15,000 to 20,000 thoroughbred Jerseys in that State. I do not say registered, mind you, for few breeders now think it worth while to pay the cost of registering



any but the most noted strains of that breed.

"In the abundance and cheapness of this breed of cattle is to be found the assurance of a great future in dairying in Mississippi; and I think that in this pine belt, along the southern branch of the Illinois Central Railroad, will be found the future dairy resources of New Orleans. The encroachments of development in this city will drive the city dairymen out of the business, in conjunction with the competition of the pine woods dairymen. A dairyman in this city must buy his feed. His dairy is on a valuable lot, for which he must pay high taxes on a high assessment. He has no chance to get land a few miles away. The land is too valuable, being used for trucking, and north for fifty miles Lake Ponchartrain and its swamp prevents. We are a city of nearly 300,000 people, growing rapidly, and, in twenty-five years, will be over a half-million in population. In the pine woods there will be plenty of land for many years yet at \$10 per acre; living, cheap; cost of keeping cattle, almost nothing; taxes, low; health of man and beast, unsurpassed. If dairymen can send milk to New York and Philadelphia and other large cities, on land worth \$100 per acre and more—sending it 100 miles or more, paying high prices for feed—can't these pine woods dairymen do as well with their advantages?"

### **Creameries.**

In the continued diversification of agriculture in the South the dairy interests are receiving more and more attention. The "Southern States" has from time to time pointed out and emphasized the pre-eminent adaptability of the South to all branches of the dairying industry and the advantages of this as compared with other agricultural pursuits.

In the Pacific Coast Dairyman (Tacoma, Washington) of October 15 there are two interesting articles on creameries, both of which are printed below. The first, "How to Start and Operate a Creamery," was read by George L. Prout, of Honey Creek, Wis., before the 1896 annual meeting of the Wisconsin Dairymen's Association. The second, "A Model Creamery," won first prize in a recent contest for the best paper on this subject:

### **HOW TO START AND OPERATE A CO-OPERATIVE CREAMERY.**

"The first point to determine in considering the advisability of starting a creamery in any locality is, whether cows enough can be secured within a radius of four or five miles to insure success. If less than 300 are pledged, we would consider it rather risky. From 300 to 500 cows would furnish milk enough to give very satisfactory results. As soon as cows enough are pledged, proceed to organize by calling a meeting and electing a president or business manager, secretary, treasurer and several directors, well distributed in their respective localities, and the best and most influential men that can be obtained. The company so formed must be incorporated and adopt a constitution and by-laws. Before proceeding much further it will be necessary to provide the funds to build and equip the plant. The old way was for each patron to take one or more shares of stock and pay for it in cash; but a better way is to empower the officers to borrow the money and make each patron responsible. He may do this by signing articles of agreement in which he places his name and the number of cows from which he will furnish milk until the indebtedness is cancelled, except in cases of a renter leaving the neighborhood or in the sale of a farm, or by consent of a majority of the directors. These articles of agreement must provide a sinking fund of say four cents on each cwt. of milk delivered at the creamery, which shall be used to pay off the money borrowed and for no other purpose. This charge of four cents will not be noticed by the patrons, and if it were, it goes into their own property, and will clear a debt much faster than one would suppose without consideration. Five hundred good cows should average 8000 pounds of milk per day, at four cents per cwt is \$3.20, or a trifle over \$1000 per year without running Sundays. Many creameries allow a larger sinking fund, and, of course, get out of debt so much sooner. Where it can be readily agreed upon, a larger rate than four cents for this purpose is desirable, as debts and outstanding accounts are particularly dangerous to co-operative institutions. After selecting officers and providing for the necessary capital, appoint a committee to visit several successful creameries; get a



list of the necessary machinery, and place a competitive order with several reliable firms. The cost of other plants of a similar outfit must be considered, and from foundation up should be paid for in cash. As to cost, much depends upon the kind and quality, but be sure to get the latest and best outfit. The usual cost of a factory complete ranges from about \$2500 to \$3000. When the creamery is ready for operation, secure a first-class butter-maker; never, never employ a man simply because he will work cheap; such a man is dear at any price; just figure a moment: 8000 pounds of milk per day will produce at least 10,000 pounds of butter per month, and one cent a pound discount means a loss of \$100 per month, besides further losses in the mismanagement of the machinery. Not only must he understand milk, cream and butter-making, but should be machinist enough to make ordinary repairs, and to prevent its being needlessly out of repair. He further needs a large amount of tact in dealing with the patrons, for it is an undeniable fact that men take offense much more readily and pull out, or kick for slighter cause, than in individual creameries. Use the very best supplies, such as salt, tubs, color, etc., and aim to produce the finest goods at all times. Be careful how you trust your shipments to bogus or unreliable firms, and when you are fully satisfied as to the honesty and reliability of some commission man, consign all your goods to him, and do not change except for good cause. It never pays in the long run to ship to those houses that quote extraordinarily big prices, but stay with your firm as long as you receive fair prices, good weight and quick returns.

"As to the officers, the president must be a good business man and command the respect and confidence of the company. The office of secretary and treasurer should give bonds. The secretary of many co-operative creameries is careless in keeping the books and records of the company, sometimes simply issuing the dividends on loose slips of paper, and at the close of the year knows but little as to exact details. He should keep a complete account of all milk received, butter made and cash received; also the items of expense, with receipts for every one, and all dividends paid, so that every dollar may be easily and satisfactorily

accounted for. Also, the Dr. and Cr. of each patron must be kept in detail. In making out the dividends for the month, the secretary will find how much butter was sold, and what the net cash received amounts to; then, after deducting actual expenses and sinking fund, will divide the balance pro rata among the patrons. The duties of the directors will be to have an oversight of the business and property, and to audit all accounts as often as may seem best. It is preferable that every officer be a farmer and a patron of the creamery, and no one need receive any salary except the secretary; if he perform his duties properly and carefully it will occupy considerable time and attention, for which he should and must be paid. But the patrons have their duties as well, and to you, as patrons, a very important one is to get posted in your business. Read good, live dairy papers and books. Learn how to feed and care for cows that the best results may be secured. A few years ago anything in any quantity was good enough to feed a cow, but now every up-to-date farmer believes in and practices to a certain extent the feeding of a balanced ration. Sometimes an old open shed drifted half-full of snow, with the boss of the herd keeping everything else out in the storm, was considered—'Well, not exactly the thing, but it'll have to do; dairyin' don't pay very well anyhow.' No! of course it does not, unless properly managed. Some men seem to expect fancy butter from dirty, tainted or unwholesome milk; an utter impossibility. Learn how to best improve your stock; it is folly to expect a herd of scrubs to equal high-grade stock, and a majority of the average herds have one or more cows that are dead-heads, kept at expense. You will pay by test, of course. Pooling milk simply places dishonesty at a premium and offers but little inducement to improve stock. Co-operation is the ideal method of doing business, but cannot succeed except in united effort. It has proven a great success in many places, and is rapidly driving out individual factories. The individual system of running creameries may relieve the patrons and officers of some care and responsibility; at the same time when one man has full control, makes no return of sales, shows no books nor results, except the price per cwt., he has un-



limited opportunity to help himself, and no one be the wiser. As a co-operative man, you must guard well the interest of your company; endeavor to promote harmony; never say they—always we. Strive to excel in all points, and success is sure."

#### MODEL CREAMERY.

"The first and most important things to be considered in establishing a creamery are the location and support you will receive from the community in which you establish yourself; that is, the amount of milk you can depend upon receiving daily to keep your creamery going. As you handle the milk generally for so much per pound for the butter manufactured, it is very important that the milk supply should be good, so that your creamery can be made a paying investment from the start. We know of no more disastrous investment than an improperly supported creamery. You should count on receiving at least 3000 pounds of 4 per cent. milk daily, with good prospects of an increased supply.

"After satisfying yourself that you have chosen a desirable district in which to establish yourself, the next step to be taken is the proper location of your creamery building. In choosing this location the base of a rising point, or where you can have the back end of your building butting up against an embankment, is preferable, thus enabling an elevated driveway up to the receiving platform, where the scales and receiving vats are kept.

"You are now ready for your building. As there are many different plans for creamery buildings, we will only attempt to describe that plan used for most creameries in this State which are built on the gravity plan; that is, when the milk is received at the highest point, the weigh vat, it conducts itself to the receiving vat, and from there to the separator by gravity.

"There are many creameries in the East built on the level, necessitating the pumping of the milk from the receiving vat up to the separator, but we do not favor this system, and always recommend the gravity system. The material used for the building may be wood, bricks or stone, but in this State, where lumber is so cheap, it is most always preferred. The price of a wooden structure should not exceed \$500 or \$600 for the size of creamery we are con-

sidering. The outer walls of the building should be made of double planking, with a four or five-inch dead-air chamber in between.

"The principal room is the separator-room, where the separator, milk and cream vats, churn, etc., are located. This room should be of good size, say 20x30 feet and 18 feet high. The flooring of this room will be a series of elevations starting from the ground floor, where your churn is located, to a two and one-half-foot elevation on which is established the cream vats; back of this is a one and one-sixth-foot elevation for the separator; above this is a four-foot elevation for receiving vat, and above these a three-foot elevation for scales and weigh vat, thus bringing you up to the door, where the milk is received.

"In addition to this main room, there should be a butter-room, where the butter is taken from the churn, worked, salted and put in shape for market; an ice or storage-room, in which to keep the butter after made, until shipped, and an engine and boiler-room. The engine and boiler-room should be on the opposite side of the main room from the butter storage-rooms, an arrangement necessary to prevent any heat or dirt from the engine and boiler coming in contact with the butter.

"We will now consider the plant, which should consist of a 1300-pound belt separator (we recommend the belt machine in preference to the turbine, as it is more reliable for speed and not nearly so liable to get out of order); one tempering vat, for heating the milk up to the required temperature for skimming; a 400-gallon receiving vat, steam heating, with connection for hot and cold water; two 200-gallon cream ripening vats, steam heating, with connections for hot and cold water; one 300-gallon ring-trunk-cover churn; one five foot-power butter-worker, fitted with revolving centre drop table; Russian Babcock testing machine, with automatic milk pipette and special acid measure; one gallon acid for same; two Simpson baby butter-molding machines, capacity thirty-six squares of butter; one set cutting apparatus for same; one 60-gallon weighing can; one 600-pound double beam platform scale; one six-foot Bair cream cooler and conductor; one twelve horse-power horizontal boiler; one seven horse-power centre-crank



engine, 24-foot smokestack; one covered crank suction and force pump; fifteen feet 17-16 shafting with end collars; four 17-16x 12 drop hangers with adjustable bearings and oil drip cups; five wood pulleys, necessary size; necessary belting, pipe fitting valves, etc.; two glass float thermometers; one eight-ounce graduate; two dozen patrons composite test jars; one pound composite test preservative; one factory butter spade; one factory butter ladle; one factory pail; one conductor head; six-foot conductor pipe; one gallon butter color; five gallons separator oil; one gallon engine oil; one gallon valve oil; one pipe and nut wrench.

"The above-mentioned machinery will cost set up in the building about \$1400, some allowance being made for freight charge. It is hardly possible to describe the setting up of the machinery in detail, and as the house from whom the machinery is purchased always sees to that part, we do not consider it necessary to give any account of it.

"We will now proceed to the handling of the milk from the weigh-can to the commission merchant. It is customary to receive milk at the creamery only once a day, and that is in the morning from 7 to 9 o'clock, the farmer saving his night's milk over and bringing it along with the morning's milk. On arrival at the creamery, the milk is delivered to the man at the weigh-can, who, after weighing it, thoroughly stirs it and takes a small sample, which he places in the composite test sample bottles, into which is also placed a small portion of preservative to keep the milk from souring, as sample of each morning's milk is placed in this bottle, which is marked with the patron's name, and at the end of the week a Babcock test is made of each patron's milk, and the average per cent. of fat is credited to the account of the patron.

"As the milk is received at the weigh-can, its weight is also recorded in the day ledger to the credit of the patron. From the weigh-can the milk is passed to the receiving vat, from which it is gradually allowed to flow into the tempering vat, where it is heated to the proper temperature preparatory to going into the separator for separation. The temperature to which this milk is heated is 80°. From the separator,

the skim-milk passes to the skim-milk tank, from where it is measured and weighed back to the patron in proportion to the amount fresh milk delivered. The cream passes from the separator spout to the cream cooler, from there to the cream vat, where the temperature is controlled by hot and cold water connections in order to bring the cream to the proper state of ripeness by the next morning, when it is churned at a temperature varying from 54° to 62°, owing to outside temperature. In summer a lower temperature is more desirable than in winter. The time required for churning generally depends on the temperature, and varies from fifteen to forty-five minutes. The churn is promptly stopped when the butter appears in the granular form. The buttermilk is drawn off, and pure cold water is allowed to run over the butter and out the bung of the churn until all the buttermilk is washed from it. The butter (still in the granular form) is then removed from the churn and placed on the worker, where the salt is added and thoroughly incorporated with the butter (one ounce of salt is generally allowed to one pound of butter). From the worker the butter passes to the molding machine, where it is molded and cut into two-pound bricks; each brick is then wrapped in white parchment paper and placed in the case ready for the cold-room, where it is allowed to remain until sufficiently firm for shipment.

"We advise shipping to good, reliable commission firms in preference to the retail dealer."

### A Picture of the South.

A citizen of Iowa who moved to Mississippi a few years ago writes to the Cedar Rapids (Iowa) Gazette as follows concerning the Southern farmer:

"He is happy; owes nobody, and is just simply waiting for cropping time again. Farmers do not work more than half the year, and they make money to feed and clothe them all the year. Now, how can they do this? This is the secret: One acre of cotton generally brings about \$20; one acre of pasture will (if seeded to Bermuda grass) pasture two head of cows and eight or nine months in the year, too. One acre of hay is worth about \$10, and vegetables of all kinds grow and yield well here; and



last, but not least, we have very short winters, and they would not be called winters at all in Iowa. They are more like November weather in Iowa. On rare occasion mercury goes down to zero. We do not need the heavy coats, footwear, fur robes, etc., which all cost money to procure. We do not need half the fuel you do, nor half the feed to winter stock, nor do we need as much money to buy the necessities of life, as provisions, clothing, machinery, coal (if you prefer it to wood), etc., as all are much cheaper than in the North."

#### **A Hog Farm at Mobile.**

Two enterprising stevedores in Mobile have purchased land on the water front of that city, and have successfully launched a hog farm. They already have over 300 head, from the small pig to 300-pound porkers, all of improved breeds, most Berkshires. The hogs are attended to by an old negro man, and they are fed on refuse bananas and cocoanuts and corn which is swept up from the wharves where the grain ships load. As to the fattening quality of the bananas, Captain Murray, one of the proprietors, said that they are very fattening, and that the hogs will leave the corn every time and go to the bananas. The green bananas that fall from the bunches as they are being unloaded into the cars at the fruit wharves are taken over there and boiled for the hogs, and Captain Murray says they like them better than they do the ripe fruit, and both better than corn.

#### **Improved Agricultural Methods in Georgia.**

Col. R. T. Nesbitt, commissioner of agriculture for Georgia, says in his annual report, just submitted:

"This being the dominant and leading industry in our State, it should be the duty and pleasure of our legislators to foster and promote everything looking to the advancement and improvement of our farming methods. In this connection, therefore, I would ask your excellency to recommend an appropriation of \$1000 annually from the money derived from the inspection of fertilizers for the purpose of carrying on farmers' institutes throughout the State.

"Considerable work has been done on

this line by professors Hunnicutt and White, of Athens, and wherever the institutes have been held much interest has been manifested by the farmers, and no doubt much good has resulted. These institutes, or educational meetings, should by all means be encouraged, and I am the more bold in asking for this appropriation to benefit the farmers, because every year since I have been at the head of this department there has been turned into the treasury of the State from \$8000 to \$18,000 derived from the inspection of fertilizers. Surely \$1000 a year from this fund might be spared for the special purpose of educating our farmers, upon whom the prosperity of the State depends. At these institutes they are taught by able teachers all that is latest and most approved, not only in agriculture, but in horticulture, dairying and the best use of fertilizers as well. In methods and in results there has been a great improvement in agriculture in this State in the past few years, and there is evidence everywhere that our farmers are in more comfortable circumstances than they were some years since. They have built better houses and barns, they own more and better stock, their lands are terraced and producing better crops. They have learned more generally the great value of the cow pea as a fertilizer, and, in consequence, are bringing up their lands to a higher point of fertility. They are more generally producing their own supplies at home, and consequently making their cotton to that extent a surplus crop.

"In all these, and in many other ways, improvement is indicated. I am glad to be able to make so gratifying a statement, which must rejoice the heart of every lover of our grand old State."

#### **Recent Phosphate Discoveries in Tennessee.**

Col. J. B. Killebrew, of Nashville, Tenn., formerly State commissioner of agriculture, writes as follows of recently discovered phosphate rock in the western part of Middle Tennessee:

"Never since the State of Tennessee has been known to civilization has a more wonderful discovery been made than that of the phosphate beds in Hickman, Lewis and Maury counties in Tennessee. In all the world such vast deposits of ore containing



one of the leading elements in plant nutrition have not heretofore been found. Descriptions of the deposits in Hickman and Lewis counties have often been published. This paper will be confined to the description of the beds recently opened in and around the town of Mt. Pleasant, in Maury county.

"It was in December last that S. Q. Weatherby, formerly judge of the county court of Lewis county, Tennessee, was passing through the country looking for zinc ores, which he believed to exist among the rocks in the vicinity of Mt. Pleasant. He saw cropping out on the farm of Scott Jennings a rock formation split up into very thin layers. He took a piece of the rock, broke it so as to see its structure, and at once recognized the same granulated structure that is seen in the phosphate rocks of Hickman and Lewis counties. Samples were submitted to H. I. Arnold, who was interested in phosphate mining in Hickman county. Mr. Arnold sent the samples at once to Lucius P. Brown, an analytical chemist of Nashville, and within ten days he received the report of Mr. Brown confirming their most sanguine anticipations. The analysis showed 78 per cent. of the phosphate of lime. For some weeks no mention was made of the discovery outside of a chosen few. Mining was begun within the town limits of Mt. Pleasant January 16, 1896, and from that time the excitement began to grow. Nearly every farmer within ten miles of the town began to look for phosphate of lime on his land. Thousands of excavations were made. In many places the outcrop sufficiently indicated its presence. Stock companies were rapidly organized and development to a greater or less extent was begun. Up to this date there are seven companies at work besides many individual workers who mine a few tons from their farms or town lots and along the borders of the public highways wherever an outcrop makes its appearance in sufficient thickness to work.

"The whole area containing the phosphate of lime in workable quantities is embraced within fifteen square miles, about one-third of which, it is estimated, contains valuable beds, where the phosphate may be easily and cheaply mined. In many places the surface of the country lies below

the deposits, and in others the beds are covered by high hills. The mining now is confined entirely to those places where the beds of phosphate lie near the surface, and where the stripping does not exceed two or three feet of earth. No mining is done by tunnelling, nor is there any explosive necessary to loosen the deposits. \* \* \*

"It is a question frequently asked, why this rich and valuable deposit was not discovered by the geological and agricultural surveys that have been made of the State. The only correct answer is that the State has never supported a chemical laboratory for the analysis of soils, minerals or rocks. \* \* \*

"The effects of this discovery will be of inestimable value to the State of Tennessee. It will cheapen fertilizers, especially those which are of most benefit to the wheat crop. To increase this crop by doubling the yield per acre will be to add many millions of dollars to the wealth of our farming population. Tennessee has a market south of it for all the wheat that it can produce, even if the present production was quintupled. The discovery of these phosphate beds will make it possible to cultivate many millions of acres of land in the State with profit, besides improving worn-out lands that are now contributing nothing to the wealth of the State or to their owners.

"Whatever widens the area of profitable agriculture in the State is a blessing to the country and a benefit to mankind. This discovery will make the State attractive to intelligent immigrants who appreciate the advantages of having a large supply of cheap fertilizers ready at hand.

"There are now employed in and around Mt. Pleasant from 400 to 500 hands in mining phosphates at an expenditure of from \$600 to \$700 per day, besides those engaged in constructing railroad tracks to the mines from the main line. Four of these tracks are now either building or about to be built.

"In these days of business stagnation and financial depression it does one good to see the great activity around Mt. Pleasant. It is a little oasis, where streams of money flow out to the great multitude who have toiled through the burning deserts of enforced idleness and comparative want.



Never in Tennessee has such a transformation been made within such a short period in any rural community. Twelve months ago Mt. Pleasant was a sleepy old town that had been chiefly noted for the magnificent farms that surrounded it. In all the land there is no spot where the soils are more fertile or the landscapes more beautiful. Broad valleys and rich slopes appear on every side encompassed by symmetrically-rounded knobs, from the bases of which a hundred springs of clear water issue to preserve the verdure of the earth and to modify the temperature of the air. Beautiful groves of beech and oak form natural parks clothed with the richest of blue grass sods. These add a charming picturesque beauty to the pastoral landscape. Elegant and commodious country residences and large, well-filled barns are seen on every hand. There are no harsh features in the landscape—no rugged mountains or deep defiles, no rushing torrents or grand waterfalls, but all are blended into a charming and melodious flow of exquisite loveliness, embracing every variety of soft, sweet and peaceful enchantment, while the heavens bend over the whole with a divine witchery of sweetness and beauty. The country is, in fact, more charming than the sacred groves of Daphne, the beauties of which taxed all the great powers of Gibbon to describe. It has been known for more than a century that no soils in the State could compare with those around Mt. Pleasant in natural productiveness. Wheat, grass, corn, potatoes and even cotton grow with remarkable luxuriance and yield with amazing fecundity. But no one had ever been able to give the reason why these lands in the immediate vicinity of Mt. Pleasant were so much more productive and whose fertility was so much more enduring than other seemingly-like limestone soils of the central basin of Tennessee. The discovery of these beds of underlying phosphates explains the reason. These deposits have the same effect as a layer of bone placed beneath the surface of the earth, the constant crumbling of which would furnish rich stores of phosphoric acid, one of the most valuable and indispensable constituents of the grain crops.

"Just now the heretofore almost deserted streets of Mt. Pleasant are crowded with

men and teams, moving with unwonted celerity. The roads from and to the mines are too narrow for the traffic. A new energy has come upon everybody. Even those citizens who have occupied small cottages in the town for years without any other hope than to eke out a meagre support from their work are finding mines of rich phosphate under their front yards and are working them. The fine school building recently erected, and considered at once the ornament and pride of the town, may have to give way for the removal of the heavy deposits of phosphates that underlie it. The countenance of every man and woman in Mt. Pleasant has been brightened and new hopes, founded on the certainty of a rich discovery, are manifested in the faces of everyone. There is no complaining of hard times, of a scarcity of money, of a lack of employment. Every workingman who comes finds a place to work. The increase in the population has nearly doubled; the rents have advanced 100 per cent., and 50 per cent. has been added to the value of town property. In this old town, where scarcely a dozen new houses has been built for a quarter of a century, the sound of saw and hammer and plane is heard everywhere. Carloads of building material are coming in every day, and loud complaints are heard that the supply is inadequate to the demand. Lots are being laid off for sale, and are to be immediately improved. New stores are being opened, and the business of the old town bids fair to be increased fifty-fold within one year. Had a gold mine been discovered of marvelous richness it may have more rapidly increased the number, but it could not have added to the zeal and energy and high hopes of the people in and around Mt. Pleasant."

### Three Crops in Six Months.

The Advocate-Democrat, of Crawfordville, Ga., gives the following as an illustration of farming possibilities in that State:

"The possibilities of Georgia land in making crops are beyond the knowledge of many who till this soil every year. Crop after crop can be raised successfully in this climate. There is a small spot of ground in Crawfordville that has made three crops



of vegetables ready for table use since April. It is a garden spot, it's true, but with plenty of care all our lots and small fields can be made as good as garden spots. On the third day of April the ground was broken and planted in Irish potatoes. The potatoes made a fair crop, were dug, and the ground planted in corn with a hoe. The corn grew up and is in roasting-ear state now. Late in August turnips were sown between and under the corn, and now the salad and turnips are getting ready to use. This ground has not been plowed since it was broken in April, but was worked with a hoe. This fact, coupled with the extremely dry weather we have had, makes it remarkable to raise three crops in six months on any land. Georgia is never behind in any respect, but when it comes to a good climate it just simply can't be beaten."

#### **Immigration Needed.**

The following extracts are from the forthcoming annual report of Col. Thomas Whitehead commissioner of agriculture for Virginia:

"A proper plan of immigration would just now give Virginia a chance to select a desirable class of citizens for her surplus lands. Wise, careful and thorough legislation is required on this subject. At present there is no State immigration movement—no law authorizing it. The work of the State board of agriculture, as its presidents have repeatedly reported, is simply giving effect to a bare suggestion in the agricultural bill of 1888. I believe a proper immigration plan, enacted into a law, with a very moderate appropriation, would secure the best families moving South from the North and Northwest, and would secure many of the desirable classes of England, Scotland and Germany."

"The above is a copy of what I said in my last annual report, and now, after twelve months' careful investigation, carefully noting all correspondence received from parties living outside of the State giving an account of their condition and means, and setting forth their reasons for desiring to change their homes, I repeat all then said, with emphasis, and make this addition:

"The subject of immigration and the securing of a suitable and desirable class of

people to occupy the surplus of land now uncultivated in Virginia, and a burden to its owners, has not been either in the original act creating the department of agriculture, nor in the act creating the State board of Agriculture, declared to be a duty of the commissioner of agriculture, nor otherwise given in charge of the State board of agriculture. Indirectly it is connected with the work of the department, and is evidently so connected with the other work of the board that much has been done by the board in this direction and some good has resulted. One of the duties of the commissioner is to prepare a hand-book of Virginia, and the language of the section clearly indicates that the object was to draw the attention of the outside world to the agricultural and mineral resources of every county in the State, and the mineral exhibit required to be collected and kept for public inspection was another indirect move to attract capital as well as population. My experience for seven years in the department, carrying on a large correspondence with citizens of other States and foreign countries, notably English-speaking people, satisfies me that there has been no abatement of the feeling that has attracted the Northern and Northwestern sections to the South. Its climate, productions and the cheapness of its lands have, where known, produced a profound impression, and the correspondence of the past year satisfies me that Virginia is still unknown to many who are changing their location in the cold Northwest and Canada.

"I am satisfied from statistics in my possession that the cutting of the larger tracts of land, of which the great body of uncultivated land forms part, would of itself, without increasing the assessed value, which is irregular and unjust to the State, produce five times the revenue now gotten from the tax on lands outside the cities and towns. There are notable examples of this in Tidewater and Middle Virginia. A board of equalization would give some relief to sections and to the State, but nothing but sales to immigrants with means to buy will erect new buildings and improvement to increase each and every tax bill without increasing the assessed value of the soil.

"The State board had prepared by the commissioner in 1893 a hand-book of Vir-



ginia, which was officially endorsed by Governor McKinney at the meeting of the governors of the Southern States in Richmond, and the demand for it in and outside of the State has required the reissue of several thousand copies in addition to the 10,000 copies first issued. It is called for daily now by men in the North and Northwest, who have just heard of it. States south of Virginia have profited by the personal circulation of their hand-books, accompanied by lists of lands for sale by agents sent out to distribute them in the Northwest. Now and then the most valuable and now fertile and productive estates are being unavoidably sold for less than one-fifth their value before the war and greatly below what is regarded by the business men of the section as their intrinsic value."

### **The Gulf Coast of Florida.**

The following remarks on the west coast of Florida, and the Pinellas peninsula in particular, are taken from the Medical Bulletin. The locality described is reached by the Plant system:

"The climate of Florida has long been deservedly esteemed as of value in a large class of chronic affections. The tide of travel at one time was directed entirely along the Atlantic coast. Within the past few years, however, it has been amply demonstrated that superior advantages are possessed by certain localities situated upon the western border of the State. Upon the one side the climate is moderated by the forests of the interior, and upon the other by the Gulf stream.

"From Apalachee bay the Gulf coast of Florida stretches to the south through about five degrees of latitude. The coast line is marked by numerous indentations. Most of these are comparatively small, but near the centre of the coast a large body of water, known as Tampa bay, curves inward, extending in a direction slightly east of north. The bay is about forty miles in length and its waters are deep. At about its centre it subdivides into two arms, the eastward being called Hillsboro and the westward Old Tampa bay. Hillsboro bay points almost due north, and at its head is situated the city of Tampa. Old Tampa bay curves a little to the northwest, and its

head is separated from the shore of the Gulf of Mexico by a narrow neck of land only a few miles in breadth. Thus between the Gulf and its inlet is a small peninsula cut off from a large one, that is, a sub-peninsula—in fact, which is almost an island. This sub-peninsula practically enjoys all the advantages of an island or marine climate. Almost entirely surrounded by water, this tract is bordered upon the west by a chain of islands. Those toward the southern extremity are separated from the mainland by a beautiful body of water called Boca Ceiga bay. The largest of the islands is termed Long Key. The islands are well wooded, and their fine beaches, strewn with beautiful tropical shells, afford excellent sea bathing.

"The tract of land, almost surrounded by water, which has been thus briefly described, is known as the Pinellas Peninsula. Its climate is most delightful. It is warmer in winter and cooler in summer than any other portion of the State. The fluctuations of temperature from day to day and from season to season are wonderfully small. Fogs and frost are unknown. The soil is extremely productive. The fruits and vegetables of tropical and temperate climes grow in profusion. The waters of the Gulf and bay abound with a great variety of fish.

"This highly favored region furnishes within itself those recreations which give zest to life. Riding, bathing, sailing, fishing, employ the time of the visitor who is strong enough to indulge in exercise, while those who are weaker can at rest inhale an invigorating atmosphere. There are numerous points of interest in the vicinity to which excursions may be made.

"Another question in relation to change of climate and health resorts does not, strictly speaking, belong to the physician's province, and yet is of the utmost importance to the patient. It is saddening to think how much wasted capability there is in this world; how many useful lives are annually sacrificed, because narrow means will not allow removal to a distant place; how many droop and die in the North, who might live for many years in the South. To this class of persons we are now in a position to give encouragement. There are abundant opportunities in the Pinellas Pen-



insula for self-support. A continued residence, in fact, will, in many instances, be rewarded by an accumulation of means. The spot is not so far distant from Northern cities as to render the journey very expensive, and living is cheap. There is no need of fuel, for instance, except for cooking purposes. For those who can afford or prefer that mode of life there are, of course, hotels and boarding-houses, but the investment of a very moderate capital will secure a lot large enough for cultivation and upon which an inexpensive house may be erected. The soil is so productive that a few seasons will render the settler independent. Ample conveniences exist for conveying the products to a near or more distant market. The cultivation of fruits and vegetables is not laborious; it is healthful; it gives every promise of being profitable, and it furnishes cheerful occupation to the mind as well as body.

"Nor will the settler in this region be isolated from his kind. Already within the last few years permanent settlements have been made in this neighborhood. A short distance above the mouth of Tampa bay a young city has been established. This place, St. Petersburg by name, contains 1500 inhabitants, is growing rapidly, and is the terminus of the Sanford and St. Petersburg division of the Plant Railroad system. A commercial future is confidently predicted for St. Petersburg. Notwithstanding the long coast line of Florida, the State possesses few harbors. St. Petersburg is one of these few. A long wharf runs out into the bay, and large sailing vessels and steamers can load and unload in perfect safety. A railroad track extends along the wharf, so that freight is rapidly shipped or unshipped, and the cost, inconvenience and delay of lighterage are saved. The channel is so deep and wide that neither pilots nor tugs are required. St. Petersburg offers advantages as a place of residence and business. All active transportation trade is already carried on here, and there is every reason to expect its increase. The city possesses churches of all the leading denominations and good schools. The opera house has a seating capacity of 1000 and the town hall of about 700. Open-air concerts are often given in the City Park."

### **Dairying in California.**

A bulletin on "Dairying in California," by Prof. E. J. Wickson, M. A., of the University of California, has been issued by the Dairy Division, Bureau of Animal Industry, of the United States Department of Agriculture. The bulletin contains thirty-one pages. It briefly describes the condition of dairying when California contained only scattered settlements of pioneers, and shows how the conditions then prevailing have influenced modern dairying. The upper coast region is mentioned as the leading dairy region, and Humboldt county as the leading dairy county, having produced almost 3,000,000 pounds of butter in 1892. The feeds most used in California and best adapted to that State are discussed. Other subjects treated are winter dairying, creameries, milk values, farm dairies, dairy markets, and dairy organization and protection.

In accordance with the provisions of the law of January 12, 1895, relating to the public printing and binding, the bulletin will be for sale by the superintendent of documents, Union Building, Washington, D. C., at the price fixed by him, five cents.

### **George Vanderbilt Estate in North Carolina.**

Mr. James Creelman, the well-known correspondent of the New York World, in a recent letter to that journal gives the following description of the Vanderbilt botanical gardens and experimental farms and forests in North Carolina: "Here George Vanderbilt has established himself in a vast domain of 145,000 acres consecrated to science, agriculture and forestry. He has already spent \$10,000,000 on the estate, and is giving something like \$1,000,000 a year. He employs more men than the Department of Agriculture at Washington does. From every land he has brought trees, plants and flowers, herds of cattle and rare breeds of fowl. He allows the farmers of the country to breed from his bulls and stallions free of expense. He sends the eggs from his costly flocks to be hatched out in the farms of North Carolina. He has gathered the experts of Europe and America to work out in this matchless place the practical problems which confront the American farmers and



stock-breeders. And when he shall die this wonderful organization, with all of its property and equipment, will be given to the government of the United States."

### **Sale of Cycloneta Farm in Georgia.**

Mr. James F. Cobb, of Cordele, has purchased the celebrated Cycloneta farm at Cycloneta, Ga., on the Georgia Southern & Florida Railway.

The farm was originally the property of the Georgia Southern & Florida Railway. It was started as a part of the progressive immigration and development policy of that road, the purpose being to make it a demonstration of the agricultural capabilities of that region. The farm contains about 1000 acres. Some of the finest bred horses, cattle, sheep and hogs in the State are on the farm, while all of the machinery, implements, etc., are of the very latest and best makes. The orchards on the farm, especially the peach, pear and plum orchards, are very extensive, and no finer fruit is grown anywhere than on the Cycloneta farm.

About a year ago the farm was sold at receiver's sale to a Baltimore syndicate, headed by General Ober, for \$10,000, which was almost like giving it away, as the machinery on the farm was worth more than that amount. It has now been sold to Mr. Cobb, it is stated, for \$25,000.

### **Progressive and Prosperous Farmers in South Carolina.**

The Charleston News and Courier, in the course of an exceedingly interesting description of a South Carolina town, says of the farming interests of the region in which it is situated:

"The farmers in the neighboring territory are intelligent and progressive, and employ only the most approved methods in the treatment of the very generous soil and in the cultivation of crops. They make money, because they know how to farm. 'I have been farming since I was a boy,' says Mr. J. H. Manning, 'and have never made a crop that did not pay me.' Mr. R. P. Hamer, Sr., has 2200 bushels of old corn and 16,000 pounds of last year's fodder now on hand. His pastures are filled with Jersey cattle and thoroughbred horses, and, with 125 prize porkers in his

pens, will have 'a regular hog-killing time' by and by. Dr. Oliver regards \$100 gross an acre as the least that tobacco should yield; Mr. J. N. Page makes from \$60 to \$100 an acre from the weed; the Braddy Brothers made 4000 pounds of seed cotton and 100 bushels of corn to the acre, and Mr. R. P. Hamer, Jr., who was graduated from the South Carolina College in 1885, and was the only member of his class to follow farming, 'now runs and has paid for 2000 acres of the finest land in this section, runs thirty plows,' lives in a two-story brick building with solid walnut doors and stairways, drives a registered Hambletonian, has built a two-story barn with cupola and windmill, and will make this year 6000 bushels of corn on 300 acres and 500 bales of cotton on 600 acres of land. It would be interesting for purposes of comparison to know how the 'professional' members of Mr. Hamer's class have fared."

### **New Orleans Fruit and Truck Trade.**

The extent of the truck and fruit business of New Orleans is shown by the following figures, reported at the annual meeting of the Produce Exchange of that city:

During the year the estimated value of vegetables brought into the city was as follows: Irish potatoes, \$472,696; sweet potatoes, \$52,034; onions, \$59,361; cabbage, \$77,949; peas, \$209,907; beans, \$543,406. The total of all truck was figured at \$1,628,371.

"The fruit products amounted to \$3,919,307; the latter included the imports by vessel. Of this amount lemons represented \$847,832; bananas, \$2,264,130; oranges, \$177,146.

### **Remarkable Corn Crops.**

The editor of the Southern Planter, of Richmond, Va., who has seen many fine corn crops, describes one he saw recently at Mr. Bellwood's farm, on Drewry's Bluff, on the James river, which he says "far exceeds anything we ever saw before." There were sixty-five acres in the field, and the crop was uniform throughout. The rows were run three feet six inches apart, and the hills were twelve inches apart in the row. The stalks averaged from twelve to fifteen feet high. The expert editor estimates the crop at 150 bushels to the acre.



This is good farming, but the most interesting part of the story is yet to be told. The land, it is stated, "has never had any farmyard manure or fertilizer applied to it. The sole means used to bring it up has been the rotation of clover, grass and corn crops, with deep fall and winter plowing, and deep and frequent cultivation before planting the corn and shallow cultivation during the growth of the crop."

The editor adds that in a field of ten acres adjoining the one described "there was growing a crop of corn which was planted in August, after a heavy crop of timothy hay had been taken off the land;" that "this corn was from ten to twelve feet high, well eared and as fresh and full of growth as a crop usually is in June," and that it "bids fair to make at least fifty bushels to the acre."

### **The Sugar Beet Industry.**

Following its recent articles on the feasibility of establishing sugar beet culture and beet sugar manufacture in the South, and on the importance of the industry, the "Southern States" gives below some letters recently received from proprietors of the great beet-sugar factories in the West in answer to letters of inquiry sent to them. The first is from Mr. James G. Hamilton, secretary of the Norfolk Beet Sugar Co., which owns factories at Norfolk and Grand Island, Neb., and Chino, Cal.:

"Omaha, Neb.

"Wm. H. Edmonds,

"Editor 'Southern States:'

"I find yours of 23d inst. awaiting me here. We are always glad to give information upon a subject which we consider of such vast importance to our country and especially to agricultural classes. This country is paying out about \$120,000,000 annually to foreign nations for the sugar we consume and which should be made at home. With a protective policy the beet sugar industry will develop rapidly in the United States. It furnishes the farmer a crop, unattended by speculative interests, the price being fixed by contract before the seed is planted, and we estimate, taking into consideration all the tributary industries necessary to the support of the beet sugar plant, that a factory as large as either of those we operate in Nebraska

gives sustenance to about 7000 people. A well-equipped beet sugar factory costs about \$1000 per ton of beets operated. Our plants here operate 350 tons per diem, commencing when the beets are ripe and closing when all the beets are worked up. The campaign generally lasts about four months, but should last six months. Our factory in California operates 900 tons of beets per diem, commencing about July 10, and can consume about 125,000 tons of beets. This year the crop there is short, owing to drought, and we will hardly operate over 70,000 tons. At Norfolk we expect to work 40,000 tons, and at Grand Island 35,000 tons. We make only the finest quality of standard granulated sugar, though any grade of sugar could be produced. Sugar made from beets is the same as sugar made from cane, provided the polarization is equal one with the other. We pay \$5 a ton for beets here, owing to a State bounty, which gives a factory five-eighths of a cent per pound on sugar testing over 90 per cent., provided the beets are bought from farmers within the State at \$5 per ton. We take no beets testing less than 12 per cent., with a purity of 80 per cent. In California we buy the beets according to their saccharine contents, which is the correct way to buy the raw material. All the beets are produced by the farmers and none by the factory. The yield per acre should average about fifteen tons. We have had as high as thirty tons here and forty-five tons in California, the average being about twelve tons at both places. This average will increase as farmers grow in experience. Land rents for \$10 an acre here (near the factory) and \$20 an acre in California for beet culture. In California, beet land near our factory has recently sold for \$400 an acre, which could have been purchased for \$25 an acre before the erection of our plant there.

"We consume at each of our Nebraska factories about one-half a carload of coke, two and one-half cars of limestone and three carloads of coal per diem; where a factory is larger this consumption is correspondingly increased. We use a very large quantity of water, which is only borrowed, and not consumed, and a factory should always be located where an abundant supply of water, limestone and beets



can be had. We believe that a protective policy adopted by our national legislature, will bring millions of money to this country, in building up plants for the manufacture of sugar from beets all over the United States, and especially in the Southwest and West. Without this protection the further development of this industry must stop, as we cannot compete at the outstart with the pauper labor of Europe or Cuba in furnishing the sugar trust with raw sugar (a highly manufactured article) to simply turn white. It is our belief that the people of the United States will, on November 3, pronounce protection to American wage-earners as the policy most wise for us to follow, together with a dollar that is as good in one part of the world as another."

The next letter is from the manager of the Utah Sugar Co., which operates a large factory at Lehi, Utah:

"Lehi, Utah.

"Wm. H. Edmonds,

"Editor 'Southern States':

"Answering yours of the 22d inst., we have a plant that has cost us about \$700,000, including 1000 acres of farm and grass land. The machinery naturally having had to be freighted from a long distance, has made it more costly than it would have been laid down at some local point from the manufacturers. We do not raise many beets ourselves, because the farmers are today very anxious to contract with us for all the beets we can use, which is from 3000 to 3500 acres per annum. The average tons per acre last year was about twelve tons; this year we expect nearly fourteen. We pay \$4.25 per ton, delivered at the factory, for them.

"In Utah there are no large holdings of farm land, the average to each farmer being about twenty acres. Our entire contracts for this year will average about six acres to each contractor. We had quite a struggle in the infancy of this industry in the year 1891 to get the farmers to raise the beets, as it requires the most intense culture, and the people did not understand it, but they have gradually been educated up to it, until today the industry stands pre-eminently over all other agricultural industries in the State. Comparing acre by acre, there is no crop that pays as well or gives the farmer so much for his own

labor, outside of giving him a cash market for his beets.

"The price of grain today in Utah is lower naturally than in the majority of the States, because if we raise more than we consume we have to pay very large railroad freights to get it to the market. We estimate this year we shall have 46,000 tons of beets, and that we shall manufacture therefrom about 9,000,000 pounds of white granulated sugar, for which we find a ready market at home. The sugar industry of the United States is crippled somewhat, because Germany is exporting large quantities to the United States and giving export bounties to its producers, so that they can undersell the American sugar in its own market. These export bounties have lately been increased, and the only protection we have today against such encroachments is an advalorem duty, which permits of undervaluation. It will be very necessary for the United States to take action in the immediate future to rectify this by the imposition of a specific duty, and when we realize that we are importing today more than \$100,000,000 worth of sugar annually from foreign countries, it can readily be seen how necessary it is that money should be saved by making our own sugar at home, and we have every resource at our command for so doing.

"I shall be pleased to communicate with you further if you desire to ask me any other questions relative to this industry, which to my mind is one of great importance and ought to be looked into more closely by the people of the United States, as we see so much lack of labor and so many thousands out of employment.

"Yours very truly,

"THOMAS R. CUTLER,

"Manager."

Here follows a letter from the manager of a factory at Alvarado, Cal.:

"Alvarado, Cal.

"Wm. H. Edmonds,

"Editor 'Southern States':

"Replying to yours of 23d inst., this factory, with a capacity of working 400 tons of beets daily, cost as it stands today about \$300,000. Up to its acquisition by this company in 1889 it had been a disastrous failure. From 1889 to 1893 it was a very profitable concern. Since 1893 it just



holds its own. The factory draws beets from about 3500 acres of land annually, most of which is near the factory. Each year it has increased its workings, and for current season will work 50,000 tons of beets, for which it will pay the farmers a uniform price of \$4 in gold coin per ton.

"None of these beets are grown by the company; all contracted for.

"The farmers are well satisfied. They grow fourteen tons per acre average, for which they receive \$56, and which cost them \$28 per acre delivered at the factory. At present there is no other crop which can compare with it for profit.

"Some farmers do better than others, naturally, but above I have given the average. Yours truly,

"E. C. BURR."

It will be noted that the greater value to the farmer, as compared with other crops, is emphasized in all the foregoing letters.

Here are some extracts from an editorial in the *American Agriculturist* of October 3, 1896:

"It is high time that the farmers of the Middle South woke up to the immense possibilities of the beet sugar industry. Experience has abundantly demonstrated that with proper culture a good yield of beets, rich in sugar, can be grown over large sections of Virginia, West Virginia, North Carolina, Tennessee and Kentucky. We imagine also that Arkansas has considerable areas suitable for this crop. Not only will this section produce a good tonnage of rich beets, but it lies almost in the heart of the vast population of the country that consumes the bulk of the sugar used in America.

"Experts maintain that the saving in freight rates on refined sugar from the Pacific coast will enable the Middle South to compete with that section in the production of beet sugar. Therefore, if the American market is protected against foreign sugar, the farmers of the Middle South will at once be enabled to grow this new crop at a handsome profit. The facts we present on this subject come right home to every farmer in the South. Whatever may be their opinions regarding the silver question, we have yet to find the man who will gainsay our position on the sugar question. While we believe in developing

the cane sugar industry of Louisiana and Florida, and to the northern extent of the sugar-cane plant, we wish to here emphasize what the sugar beet crop means to the Middle South.

"How substantial is the basis for our advocacy of the beet sugar industry in the Middle South is shown by this fact: Mr. Oxnard, the presiding genius of the beet sugar factories in Nebraska and Southern California, who also is interested in one of the most modern cane plantations in Louisiana, maintains that beet sugar is the better proposition of the two. He also believes that the Middle South is the ideal location for this industry. In addition to the reasons above noted, this section possesses a long season and a variety of soils, so that beets may be planted early and in succession, until late in the spring. A sugar factory can begin operations quite early in the fall and run for perhaps a hundred days on beets direct from the fields, thus avoiding all the labor, expense and danger of ensiling the beets to keep them during cold weather."

G. W. Shultz, dealer in Southern lands, Columbus, Ohio, in subscribing to the "*Southern States*," after having been sent specimen copies of it, writes: "This journal ought to find its way into every family, North and South, of our broad lands."

The Department of Agriculture has issued a bulletin entitled "Course of Wheat Production and Exportation in the United States, Canada, Argentina, Uruguay, Russia and British India from 1880 to 1896."

A very important part of the territory of the Plant System in Florida is elaborately described in an article entitled "A Safe Section for Settlers," covering several pages in the *Jacksonville Times-Union* of October 18. The article, which is by S. Paul Brown, is an admirable description of a region rich in opportunities.

As a result of the recently established line of direct steamers between Galveston and European ports and the emigrant rates from Galveston to Western points established by the railroads, that city is now getting a large share of European immigrants.



It is also doing a large grain export business, steamers going out taking grain and returning bringing immigrants.

Messrs. G. J. Westervelt and H. De Boer are the pioneers of a colony of Hollanders to settle in Caroline county, Maryland. The settlement will comprise about 2500 acres of land, and the county commissioners have appropriated money to make shell roads through the settlement. The colonists will engage in truck farming, the land being divided into farms of about fifty acres each. The settlers will come from the West and the Northwest.

The Northern colony at Green Cove Springs, Florida, was increased in October by the arrival of a number of settlers from Iowa, Illinois and Michigan. Most of them took household furniture and farming implements with them.

Last winter and spring a number of Western and Northwestern people bought farms near Tallahassee, Fla., through the immigration and land department of the Clark syndicate. Those who did not at once occupy their lands are moving down to take possession of them now. Mr. J. J. Eastman, of Minnesota, recently arrived at Tallahassee with a number of fine thoroughbred horses and a supply of agricultural implements. He will go largely into stock-raising, and will at once erect a fine residence and a complete equipment of barns and outbuildings. Mr. H. C. Miller, of Wisconsin, has also arrived with his family, carrying agricultural implements and stock.

It is said that a colonization company has bought 25,000 acres of land in Washington county, Fla., through the Tampa Real Estate and Loan Association. The land is covered with fine timber, and a large saw-mill plant will be erected to utilize it. As the timber is removed the land will be settled up with farmers from the North.

A colony of Northern settlers has been established in Clark county, Alabama, near Thomasville. A correspondent reports that besides a large number of immigrants who have already arrived, a committee rep-

resenting 100 families in the vicinity of Bay City, Mich., has been investigating the country.

It is stated that a colony of Italians from Pennsylvania is to be settled in Georgia, near La Grange, in Troup county. They will engage in truck farming and fruit growing.

The agent of a number of Swedes has bought a tract of 5000 acres of land near Bristol, Tenn. It will be cut up into 20-acre tracts for a Swedish colony, which, it is said, will comprise about 1500 people.

The Macon Telegraph says:

"A party of six capitalists arrived in the city recently from West Superior, Wis. They are on their way to Sibley, Ga., where they will invest in large properties there.

"One of the party, Mr. William J. Holden, is the representative of twenty-four prominent business men of West Superior, who have secured him as their agent to go in advance and look into the property and report to them his observations. If Mr. Holden should make a favorable report they will come South and invest.

"Chief Kellogg, of the West Superior fire department, will arrive in the city today.

"Mr. Kellogg is also an advance agent. He represents twelve prominent Northern capitalists, who want to invest at Sibley. Some of the party are already interested in some extensive properties around Sibley. They own 11,000 acres of good land in one tract. When the whole party arrives the work of building up and improving will begin, and it will not be long before a second Fitzgerald will be going up at the pretty little town of Sibley."

A wholesale fruit dealer in New Orleans expects to import from Mexico the coming season about 150,000 boxes of oranges. The Florida crop this year will probably not exceed 250,000 boxes. At the time of the freeze nearly two years ago Florida's crop was about 5,000,000 boxes.

In the "Southern States" for March, 1896, it was stated that Col. W. D. Chipley, of the Louisville & Nashville Railroad,



had just returned from a trip to Europe, and that his visit would probably result in the establishment of a colony of Swedes in Western Florida. This expectation has been realized. In the latter part of October seventy-five settlers arrived at New York from Sweden and went at once to Florida to confer with Colonel Chipley about selection of lands. It is said that these represent about 300 families, with whom Colonel Chipley arranged for settlement in Florida.

The Georgia & Alabama Railroad Co. will erect a handsome passenger station at Americus, Ga.

The new town of Thorsby, in Southern Alabama, on October 17 opened its first schoolhouse, a handsome building of two stories, with accommodations for 300 pupils.

A little more than a year ago the site of Thorsby was a forest. The town has now a population of 200 or more Scandinavians from the Northwest, who have moved to Alabama to engage in fruit-growing and farming.

Mr. H. T. D. Wilson, of Houston, Texas, has sold to the American Land Co., of Chicago, Ill., a tract of 6000 acres of land situated on the Galveston, Houston & Henderson Railroad, between Houston and Galveston. The American Land Co. has a capital stock of \$1,000,000, and it is stated that the Atchison & Topeka, the Wabash, the Iowa Central and the Chicago & Northwestern railroads are interested in its operations. Mr. James H. Brady, of Chicago, is its president. The property purchased will be subdivided and colonized by farmers from the North, and enterprises will be established, including cotton compresses, cotton gins, canneries for fruits and vegetables, etc.

A gentleman from Philadelphia, who has been spending the summer in the Warm Springs Valley, in Bath county, Virginia, has again called attention to the excellent flavor given the mutton by the mountain ranges in that section of the country. This gentleman has traveled extensively in this country and in Europe, and he says that

there is but one section in either this country or Europe where the same delicate flavor is produced, and that is by the ranges of the higher parts of England and lower Scotland, and he states that in London the sheep from that section bring higher prices, but that occasionally they fail to produce the desired quality of mutton.

The observation of the Philadelphia gentleman would seem to be borne out by the statement made to the "Southern States" by Messrs. Wm. M. and J. T. McAllister, of Warm Springs, Va., that in the New York markets the sheep raised in that part of Virginia and West Virginia, along the Alleghanies, command the very highest prices.

## CORRESPONDENCE.

### The Sort of Immigration That is Desirable.

*Editor Southern States:*

The question as to whether the improved conditions and enhancement of values in the South are a result of only a temporary boom, or the result of merited conditions and permanent prosperity, is one that the American people are giving more thought and attention to than might at first be supposed. The class of immigration that is really valuable and desirable for any country is not the class of people who are easily influenced and move about from place to place, and who are never satisfied, no matter what the conditions are, preferring to be always looking for some new Eldorado where they can become rich without work; but instead they are the hard-working yeomen, the wealth producers and home builders, the men to whom it means something to pull up stakes and emigrate to a new country. This is the class of men that build up a country and develop its industries and make up its list of substantial, progressive citizens, and this class of men are slow to jump at conclusions or change their locations without first thoroughly investigating the advantages that are offered by the different sections bidding for immigration.

There are two classes of people who may be said to be prospective immigrants: the one, the floating class, who are constantly drifting from one place to another, who



never stop to investigate actual facts and conditions, who, as it were, keep their grips packed, ready to fly to any place where it is reported that "gold has been found," people who are always looking for greener fields and pastures new. The other is the hard-working, industrious farmer and business man, who for years have been battling against poor crops and declining prices, each year economizing more and more, and who, many of them, in spite of the most adverse circumstances and unfavorable conditions, have been able to save up something for their old age. These people, together with the shrewd capitalists, are not the ones usually found chasing after "wild cat schemes," preferring rather to endure the ills they have than fly to others that they know not of; they are the people that go to a new country only after they have investigated its advantages and resources. They must know for a certainty the climatic conditions, the character and fertility of the soil, the quality and value of its products, the cost of living, its educational advantages—in fact, they must be able to compare, weigh and determine the advantages and opportunities that a country offers as compared to their present location. It is safe to say that more people today are giving thought to these problems than ever before. They are investigating in every manner possible the claims and inducements that the South holds out.

The unscrupulous methods and practices of many boomers and real estate men in different sections of the country have taught the conservative element of the people a lesson, until today that section of country that receives any considerable amount of a desirable class of immigration and keeps them must have something besides glowing newspaper accounts and paper towns and cities to recommend it. Its claims to recognition at the hands of the hard-working, industrious, well-to-do farmer and the careful, conservative business men of the North and West must be founded on actual merit. Such a section, before it becomes the permanent home of any considerable number of the better element of the middle classes, those people who develop industries, who are successful agriculturists and who build factories, towns and cities, must possess the advan-

tages of a healthy climate, a fertile soil and business opportunities; and no truer index of the real worth of an agricultural country can be found than by the class and condition of the people who are locating in it and the class of improvements they are making. Judged by this condition, this criterion and test (and it is a sure one), this part of the South—Southwest Louisiana—is indeed fortunate. The metropolis of Southwest Louisiana, the town of Crowley, and that section immediately surrounding, is fast being settled up by a thriving, industrious class of wealth producers. One has only to visit the comfortable homes and model farms of these people to be convinced at once of the fact that they are of the better class of farmers from the Northern and Western States—men of modest means, who have studied and investigated the advantages of the country, some of them two or three years before moving here. They have brought with them their Northern horses and improved machinery, new and improved methods of cultivation, and, above all, a stock of push and energy that within itself is a mine of wealth to any country.

The factories and mills that they are building up in the prosperous towns in this region to work up and consume the products of their industry are all of a substantial nature, and indicate that they have faith in the country and are here to stay.

The past twelve months have witnessed the establishment of many valuable and important industries in the town of Crowley, perhaps more than in any previous year of the town's history. Among others may be mentioned the finishing and putting in operation of the Eagle Rice Mill, with a capacity of 500 barrels of rice per day; the establishment of the People's Independent Rice Milling Co., Ltd., who have erected a brick and iron structure second to none in the State, with a capital of \$30,000, and additions to the Crowley Rice Milling Co.'s property costing \$10,000; the building and equipping of a 12-ton ice plant, the establishment of a steam laundry, a cooperage factory, a telephone exchange system, a new drainage canal for the town, etc. W. W. Dusen & Bro., of Crowley, La., who have been at the head of the immigration movement to Southwest Louisiana, inform



me that increased interest is being manifested in irrigating canals for the rice plantations. The success of the ones already established have been phenomenal. The construction of these canals, with their pumping plants, opens up an unlimited field for the investment of capital that is absolutely safe, and where the returns are sure to be large when all of the rice lands of Acadia Parish are assured an abundant supply of water for irrigating purposes, which there soon will be through the establishment of these canals. Every acre of these lands will double in value. The steady, constant flow of the better class of immigration to Southwest Louisiana for the past seven years, and the remarkable success that has attended the efforts of these people to better their condition, demonstrate the fact that the opportunities and advantages claimed for the country have not been exaggerated or overestimated.

New Orleans, La.

## NEWSPAPER COMMENT.

### New Importance of Farming.

Agriculture, in its various relations to humanity, is one of the most important pursuits in which mankind can engage. One might with profit give a moment's thought to the question, What would we do if the farmers stopped work, and what sort of an outlook would it be for a reliable dinner if the farm and the garden were, for even a little time, put out of reach of the householder?

Within the past few years the most remarkable change has been taking place in everything belonging to farming and gardening. Now it is not in the least beneath the dignity of the millionaire to send beets and beeves to market, nor are parsnips and poultry, squabs and squashes neglected in the output of the farm. It is a matter for congratulation when the owner of a large and valuable tract of land secures a crop that not only supplies his own immediate wants, but helps to replenish an exchequer that is rapidly depleted by the expensive improvements and costly equipment of the place. Time was when the idea of selling fruit and flowers would have been ridiculed by well-to-do people, and when the sending

of produce to market would have almost, if not altogether, shut the wealthy farmer out of the pale of good society.

But all this is changed, and wisely so, and the rich man is quite as ambitious to excel in the products of his farm and stock-yards as the peasant whose life has been devoted solely to this pursuit. Indeed, it is becoming a fad of wealthy and fashionable persons to compete for prizes and premiums at State and county fairs, and to make special efforts to grow the very best vegetable and animal crops that their premises and opportunities afford.

There is nothing in the world of greater importance than the farming interests of any community. They are the backbone of the land, and it is a wise and sensible thing that this sort of backbone is becoming more and more appreciated and much more highly thought of than heretofore.

It is scarcely too much to expect that within the next quarter of a century the tiller of the soil will find himself among the most favored sons of the earth. His occupation is an honorable one, and the better he understands it and the more strictly he attends to it the more respect he will merit and receive.

As a business for women, agriculture in some of its branches cannot be too highly commended. The raising of small fruits, the growing of flowers and the rearing of poultry are pursuits that are quite within the range of the average woman's capabilities. The returns are quite as certain as those in any of what have been called strictly feminine fields, and the work, while in some respects it may be a trifle more laborious, is nothing like so taxing to the vital energies as many things that have been looked upon for centuries as legitimately a "woman's province."

The future of the garden and poultry-yard is, to a certain extent, in the hands of women, and every year new avenues of profit are opening before careful and comprehensive feminine hands and heads.—  
New York Ledger.

### A Stupid Slander.

The attention of the Times-Union has been called to an article in the New York Independent, which asserts that the farmers of the cotton territory of the South are obliged, by



natural conditions, to grow cotton and nothing else, that they are in a condition of serfdom to the country merchants, who hold them in the bondage of perpetual debt. It is further stated in the article that Northern farmers, who have moved South with money, thrift and energy, have, in a little while, sunk to the level of serfdom, and that there is not a single instance on record of any Northern farmer who has gone South since the war and prospered to any great extent. \* \* \*

The value of the corn crop of the South is nearly as great as that of the cotton crop. The per capita production of corn in the South is much greater than in the North. In 1894 the South produced as much corn as the North, though only half as populous.

The South produces one-fifth as much wheat and oats as the North. Counting the three crops, corn, wheat and oats, the South in 1892 produced per capita \$15.62, against \$20.54 for the North. In addition to this, the South produced \$15 per capita in cotton.

The North does not produce a single crop that cannot be grown in the South, and not one that is not to a greater or less extent grown. The South produces cotton, cane, rice and other crops not grown at the North. Southern peaches and melons are shipped North in large quantities every year. Farmers at the North owe dollars where Southern farmers owe dimes. All these statements can be proved by official statistics.—Times-Union (Jacksonville, Fla.).

### How to Induce Immigration.

Perhaps the most important question relating to their material interests that is before the people of South Carolina today is how to induce the immigration of a desirable class of people to occupy the surplus farming lands in the State, and to establish and develop the thousand new industries which are possible to our favored conditions, but are awaiting the impulse of men who can see the opportunities presented, and who have the knowledge and skill and means to employ them to good account. It is a question that concerns and interests the people of every part of the State—of every county and district and town and village. There is not a county that cannot

support double or quadruple its present population and still have abundance of room to spare. There is not a town or village that would not be greatly benefited by the increase of its working inhabitants and the introduction of new industries of any and every kind that are suitable to its size and surroundings. We have too small a population for the territory we own. We have too few industries and too little varied to give full and profitable employment even to the population we have. We should try to improve our status in these unsatisfactory particulars, and try with all the means we can bring to bear, and keep trying until we accomplish the objects in view—to bring more good and industrious people into the State, and provide work for all that are here and all that shall come here.

It is the simple statement of a fact that we are accomplishing less in this way in South Carolina than any other Southern State. We have made some efforts heretofore to induce immigration—the main desideratum—but they were few and feeble, and were speedily abandoned, because they were not at once productive of the desired results. We should renew them and multiply them and strengthen them and “push” them, and keep pushing them until they are rewarded with the desired measure of success.

What direction our endeavors should take, and who should direct them, are the questions which must first be answered, of course, and they should engage the attention of every man who has the interests and prosperity of the State or of his own locality at heart. The legislature could do much to forward the work by providing a suitable immigration agency and an appropriation of money for it to work with. The trouble with an official and general State agency, however, is that it is expected to cover the whole State at once, and is not likely to have the pecuniary support that task requires, and that if it fails to work miracles off-hand it is pretty soon to be discarded by the next legislature to the one that forwards it.

The business men and progressive farmers and land owners of any county could fill their county at their pleasure if they would get together and plan together and work together in the common cause and

interest. Some of the counties in Florida have won large accessions of desirable settlers in this way. It was the case a few years ago, if it is not so now, that any seeker for a home could write to the authorities of almost any county in that State for information, and would receive from them a carefully-prepared official publication, with maps, etc., telling him everything he wanted to know in regard to prices of land, products, schools, churches, watercourses, industries, health conditions, etc., of the county, so that he could get a fair idea of its character before visiting it. There is not a county or town in South Carolina that can mail a similar pamphlet on demand.

The best work that has been done in the immigration field, however, has been done by the railroad companies. They have settled and built up the "West" from the Mississippi river to the Pacific ocean, and are now developing the Southwest and some parts of the South in the same way. The story of their work would fill volumes; the result of it is shown on the ever-filling map of the country. When they make a business of inducing immigration, they induce it. They have made Texas what it is, and Florida what it is, in a few years. They are filling up Southern Louisiana and Southern Georgia and Eastern North Carolina and Middle Tennessee.—*News and Courier*, Charleston, S. C.

### **The South's Prosperity.**

The great future of the Southern States is opening up. The commerce of the Gulf ere long will be theirs. Scarce a week passes nowadays without chronicling some new achievement in this direction. The Cincinnati Post calls attention to the new transoceanic commerce of Galveston out of her own harbor in deep-draft ships and to the heavy shipments last month of maize from Mobile and Pensacola to Mexico.

This week was opened the Gulf & Ship Island Railroad, of Mississippi. It is seventy miles long and connects Ship Island, Mississippi's only Gulf port, with the interior of the State.

This week Mobile is receiving her first lot of wheat for Gulf shipment—192 carloads. \* \* \*

The residual and by-product of the South's cottonseed-oil mills, the cottonseed

meal and cake, which used to rot around the ginhouses, will be exported this year to an estimated return of from \$7,000,000 to \$8,000,000.

The annual report of the Fourth Assistant Postmaster-General, which has just been issued, shows that there were 70,360 postoffices in operation at the close of the fiscal year, there having been 1750 offices discontinued and 2046 established. Of the new offices established, more than one-fourth are in the five Southern States of Georgia, Mississippi, Texas, Arkansas and Kentucky. This number is nearly three times as large as the sum of those established in the five Northern States of Illinois, Indiana, New York, Ohio and Pennsylvania. The number of new offices in Mississippi alone exceeds those established in the four States of Montana, Washington, North Dakota and South Dakota.

New postoffices always point to the establishment of new business enterprises, the building up of a country and the settlement of the waste districts. The discontinuance of offices indicates the shifting of the population, or perhaps the economy of the government in consolidating offices in order to reduce expenses.

The figures of the department demonstrate one thing very clearly, and that is that the South is exceeding all other sections of the country in growth and development at this time. New railroads, new towns and new settlements all call for more postoffices, the result of increased business and a larger population. Just as the bank clearings and railroad earnings have shown for several months, the postoffice department's report but further proves that the Southern States are at the head of the procession of progress and growth.—*The Telegraph*, Macon, Ga.

### **Kansas and the South.**

The recent State census of Kansas shows that the commonwealth has lost one-fifteenth of its population during the past six years, the number of inhabitants now being only 1,336,659, against 1,427,096 in 1890. As the rate of growth between 1880 and 1890 had been 43 per cent., an actual loss of 1 per cent. a year on the average is a startling change.

This Kansas showing is only one indica-



tion of the change in the tide of settlement that is in progress. The rush into the West has everywhere fallen off, and in some States is being succeeded by a reversal of the current. People have found by bitter experience that the West is not what it was represented to be; that instead of being a region of unfailing fertility, it has large tracts that are little better than deserts; that long droughts in summer and bitter storms in winter are the rule rather than the exception in many localities, and that the hope of comfort is a vain one.

As the West loses ground the South must gain. The milder climate of this section is of itself enough to turn the scales in its favor with a host of people. Its freedom from terrible droughts and destructive blizzards give it an immense advantage over the West.—Florida Citizen, Jacksonville, Fla.

## BOOKS AND MAGAZINES.

Sir George Tressady: A Sequel to "Marcella." By Mrs. Humphrey Ward. New York. The Macmillan Co. Two vols. \$2.

Praise of Mrs. Ward's new book seems general. The readers of the Century magazine have felt the charm of her artistic picture of English life, and this time she has given us in full measure what we really care for—the old, old story, as a novel-writer should. Who goes to them for religion or politics? Who cannot escape their preaching by a generous turning of leaves? Mr. Gladstone had a great deal to do with the way people poured over the pages of "Robert Elsmere," but the only things we remember about it now are the argument that came to nothing and the love-story which, like a silver arrow, thrust its beauty through the crumpled leaves. "Marcella," too, was a strained limning of a girl we could not fall in love with, although we felt a sympathy for her noble aspirations and very human mistakes. In Sir George Tressady the gifted woman, whose writing has hitherto interested us, takes us cordially by the hand and leads us through what she calls "The House of Life," unfolding for us, in a series of ever-changing and always vivid pictures, the lives of some very real

people. The character of our old acquaintance, "Marcella," now in the full glory of her magnificent development, a living, loving woman, and the miserable little "Letty," whom we feel like calling, with Bella Wilfer, "a limited little beast," when brought in touch with each other make drawing for a master-hand, and the skill of our painter does not fail. We feel with each; we are swept on by Marcella's enthusiasm, and her passionate pity for the unfortunate makes us love her, although her futile plans to better suffering humanity only fill us with regret that one cast like the old heathen in so noble a mould should want the touchstone which alone can shed light on this dark world, and we feel, with wretched, jealous little Letty, too. How mean and unlovely she was, and how much she had to make her mean and unlovely! As for Sir George Tressady, he is the mere framework which holds the living pictures. He is an attractive and ornamental piece of work, however—the talented man of position, whose career, marriage and love-story—for they follow in this order—finds always willing listeners. Was it not Dickens who guessed "George Eliot" to be a woman, because he said all men from Shakespeare down describe men for us, and women, women? So Mrs. Ward creates women, although her wisacre talk of English socialism and her occasional pedantry seem designed to ensnare the simple. Who but the dictionary knows what "George's hedonist temper," or "the same ineluctable facts," can be? Surely not the novel-readers! However, the interest holds out to the very end in this well-written book, and that cannot be said of an ordinary novel. It is not for the reviewer to tell the story; the author begs that privilege. The critic's "Read it; it will please you; you will enjoy it," and when possible "It will help you; it will make you better," or "Let it alone; it is rubbish, and reading time is to valuable to waste," or "It is unworthy and will leave a stain," should be sufficient. Of Sir George Tressady the honest critic will say: "Give yourself the pleasure of a few odd half-hours with this book for a companion; send it to some friend to line a traveling-bag with pleasant thoughts instead of ennui." The Macmillan Co., of New York, has gotten out an



edition in two volumes for \$2 which as to both print and cover is most satisfactory.

**Famous Givers and Their Gifts.** By Sarah K. Bolton. New York. T. Y. Crowell & Co. \$1.50.

Mrs. Bolton has added another to the long list of "useful books" that have come from her industrious and prolific pen. For the enlightenment and encouragement and stimulation of the young she has produced such works as "Poor Boys Who Became Famous," "Girls Who Became Famous," "Famous Men of Science," "Famous American Statesmen," "Famous English Statesmen," "Famous American Authors," "Famous English Authors," "Famous European Artists," "Famous Types of Womanhood," "Famous Voyagers and Explorers," "Famous Leaders Among Men," "Famous Leaders Among Women" and other volumes of like character, besides a book of poems. The present volume furnishes brief life sketches of some of the more notable among those who have established great universities, libraries, art galleries, hospitals and other works of beneficence, together with more extended accounts of their benefactions. The book is illustrated with a number of portraits, and is altogether of such attractiveness as to both matter and make up that almost anyone in making a selection from recent publications for purchase would be likely to put this on the list.

**The Nut Culturist**, a treatise on the propagation, planting and cultivation of nut-bearing trees and shrubs adapted to the climate of the United States. By Andrew S. Fuller. Published by the Orange Judd Co., New York. \$1.50.

The publication of this book is particularly opportune just now in view of the large attention that is being given to nut culture. Some of the advantages of this, as compared with other agricultural pursuits, have been pointed out in former issues of the "Southern States," notably in special articles in the July and August numbers of this year. The New York Tribune recently said:

"The question of making nut culture profitable is no longer open to doubt, for there are scores of groves in New Jersey

and other States that pay big dividends upon the investments. These plantations are not by any means confined to chestnuts, domestic or imported, but they include nearly all of the nuts of commerce that will thrive anywhere in the United States. \* \* \* Nut-growing has many advantages over fruit culture, and farmers who have entered it are enthusiastic in their attitude. They feel safe from the uncertainties of irregular markets, for there is no danger of an overproduction for many years to come."

When it is considered that the United States sends abroad annually several millions of dollars to pay for various kinds of nuts imported from foreign countries, the greater part of which could profitably be grown at home, it seems strange that so little attention has hitherto been paid by American farmers to the planting and raising of edible nuts.

The author of this book has for many years made a careful study of the entire subject, and has given in this volume the results of his experiences and investigations. In successive chapters he treats upon the almond, beechnut, castanopsis, chestnut, filbert, hickory and walnut, giving a condensed account of their history, description of all the species and varieties, together with their propagation by seed or otherwise, modes of grafting and budding, transplanting, pruning, gathering and marketing; insect and fungus enemies, and the best means of preventing their ravages, and all the important details in regard to the methods and practices for the successful and profitable raising of nuts.

With the October number, the Pocket Magazine completed the first year of its existence. Its publishers report that its circulation has withstood the general depression in business, the silver scare and even the competition of the bicycle.

The annual Souvenir Book issued by Clapp & Co., bankers and brokers, New York, is probably the most thorough, complete and comprehensive compendium of statistics published by any firm in the country. With a copy of this at hand, one might almost dispense with census reports and other statistical books of reference so



far as trade, industry and finance in the United States are concerned.

In the November number of the *Atlantic Monthly* Charles Egbert Craddock begins a novel of Tennessee mountain life, which, however, is by no means confined to mountaineers, and brings in dramatic contrast to the queer life of this community the conventional society of the West; a novel full of power as well as of picturesque charm, which is called "The Juggler."

A series of articles of unique interest has been undertaken by the *Ladies' Home Journal*. It is to be called "Great Personal Events," and will sketch the most wonderful scenes of popular enthusiasm and thrilling historic interest which have occurred in America during the past fifty years. Each one will be graphically detailed by an eyewitness, while leading artists have been employed to portray the events in pictures made from old illustrative material. The series has just been started in the current number of the magazine, Hon. A. Oakey Hall, ex-mayor of New York city, sketching the scene, "When Jenny Lind sang in Castle Garden," which still stands as the greatest single concert in the annals of American music.

Magazine articles about the late George Du Maurier are likely to be quite numerous during the coming months. The first noteworthy attempt to form an estimate of Du Maurier's career that has appeared in America since his death is in the form of a profusely illustrated article contributed to the November Review of Reviews by Mr. Ernest Knauff, who describes Du Maurier's qualities as an artist and illustrator, rather than his more recently developed gifts as a writer of fiction. Mr. Knauff has for years followed Du Maurier's work in *Punch*, and his article is illustrated with many evidences of his zeal and success as an enthusiastic collector of Du Mauriana. There are also several interesting portraits of the author of "Trilby."

Harper's Weekly, dated November 7, contains the first chapters of a new short serial of Scotch life, entitled "Lady Love," by S. R. Crockett, author of "The Gray

Man and "The Raiders." There is a four-page article, profusely illustrated, on historic New York houses. Boston's subway, by which the street-car traffic in the business portions of the city is to be put underground, is described in text and pictures.

An important feature of Harper's Magazine for several months to come will be Poultney Bigelow's series of papers on the "White Man's Africa," treating in a thoroughly popular way the new continent recently opened up to European exploitation. The first paper in the November number is merely introductory, but it will give a novel view of Jameson's raid from material placed in the author's hand by an English physician and a Boer official, thus presenting both sides of this remarkable episode. The series is the result of a journey to South Africa undertaken by Mr. Bigelow for Harper's Magazine, and is illustrated from photographs specially made for the purpose.

Littell's *Living Age* has, through its more than fifty years of existence, maintained the highest degree of literary excellence. The publishers now announce certain "New Features" which will greatly enhance its value in the eyes of every intelligent reader. The first of these new features will appear in a November issue—to be continued monthly thereafter—in the form of a supplement, containing three departments, namely: Readings from American Magazines, Readings from New Books, and a List of the Books of the Month. In addition to the supplement, the field of the *Living Age* will be still further extended so as to include, during the coming year, occasional translations of noteworthy articles from the French, German, Spanish and Italian reviews and magazines.

For the past two years Henry T. Coates & Co. have been publishing in their *Literary Era*, in monthly installments, an alphabetical list of American genealogies that have appeared in book form. These lists have now been collected into a bibliography which will shortly be published in book form under the title of "American Genealogies in Book Form." This bibliography has been prepared by Mr. T. Allen Glenn,



of Philadelphia, an authority on American genealogy, who has devoted many years to a study of the subject. His bibliography will supercede all earlier lists and will be of great service to historical societies and genealogists.

## MISCELLANEOUS.

### Bulletins of the Experiment Stations.

In Bulletin No. 121, of the Cornell University Station, Ithaca, N. Y., Prof. L. H. Bailey furnishes some valuable "Suggestions for the Planting of Shrubbery." The text is illustrated with a large number of engravings.

Bulletin No. 72, of the Alabama Station, is "A Study of Skin Tumors of Horses and Mules in Alabama."

Bulletin No. 42, of the Arkansas Station, records the results of certain investigations "Concerning Wheat and Its Mill Products."

The subjects discussed in Bulletin No. 33, of the Iowa Station, are: "Lamb Feeding;" "Steer and Heifer Beef;" "Old Process vs. New Process Linseed Meal;" "Notes on Injurious Insects;" "Fresh Cow vs. Stripper Butter." The general record of the results of experiments is emphasized and made clearer by elaborate illustrations.

Bulletin No. 38, of the Texas Station, furnishes some new information about Canaigre, the tanning plant.

Bulletins Nos. 41 and 42, of the Maryland Station, describe a "Test of Methods of Preparing and Feeding Corn Fodder," and give "The Maryland Trees and Nursery Stock Law and Other Information of Special Interest to Nurserymen and Fruit Growers."

Bulletin No. 116, of the New Jersey Station, contains an article on "The Pernicious or San Jose Scale," fully illustrated.

Bulletin No. 31, of the Delaware Station, gives in a pamphlet of twenty-three pages a valuable article on "Milk Sampling."

Bulletins Nos. 30 and 31, of the Nevada Station, are devoted to a study of "Wheat—Cutting at Different Dates," and "Texas Cattle Fever."

Bulletin No. 44, of the Utah Station, reports results of experiments with Alfalfa or Lucerne. Bulletin No. 60, of the Kansas Station, discusses at considerable length the results of "Steer Feeding Experiments."

Bulletin No. 43, of the Louisiana State Experiment Stations, has for its subject "Bovine Tuberculosis."

Messrs. Shorter, Davis & Allison, Montgomery, Ala., are sending out some attractive lists of farms and colonizing tracts and pine timber lands in Alabama. Some of the South Alabama farms they are offering would seem to be exceptionally good bargains.

Messrs. W. L. Van Duzor & Co., Kissimmee, Fla., are sending out free to applicants a very attractive pamphlet devoted to an exposition of the advantages and attractions of the Kissim-

mee Valley, Florida. The pamphlet is elaborately illustrated with handsome half-tone engravings of gardens, orchards, views of the town of Kissimmee, etc.

The 1896-97 catalogue of the nursery of E. W. Kirkpatrick, McKinney, Texas, contains a list of trees, plants, fruits, etc., suited for Southern growing, together with some interesting information and directions as to cultivation.

The Passenger Department of the Nashville, Chattanooga & St. Louis Railway, Nashville, Tenn., has published a pamphlet, by Col. J. B. Killebrew, entitled "The Best Country for Immigrants." Among the chapter topics are: "A Few Earnest Words to People Looking South;" "Some Misapprehensions Corrected;" "A Brief Sketch of the Advantages of the Central South;" "The Various Crops Growing Along the Line of the Nashville, Chattanooga & St. Louis in Tennessee and Alabama;" "Two Thousand Dollars: What a Man Can do with it in the Region of Country Through which the Nashville, Chattanooga & St. Louis Railway Passes;" "A Convincing Argument: Climate of the Northwestern States and of Tennessee Compared—Figures Taken from the Weather Bureau;" "The Future Fruit Garden of the South—the Great Fruit Section Reached by the Nashville, Chattanooga & St. Louis Railway;" "The New Switzerland in Tennessee—True Story of the Rise of the Hohenwald Colony—One Hundred and Fifty Happy Colonists," etc. Copies may be had upon application.

The "Southern States" is in receipt of the eighth annual report of the Rhode Island Experiment Station, which presents a review of the work of the station for 1895. Much of the report is devoted to a study of the "Acidity of Upland Soils," including the results of experiments in the growth of various plants upon an upland acid soil before and after liming. The tables and the text are accompanied with a large number of illustrations.

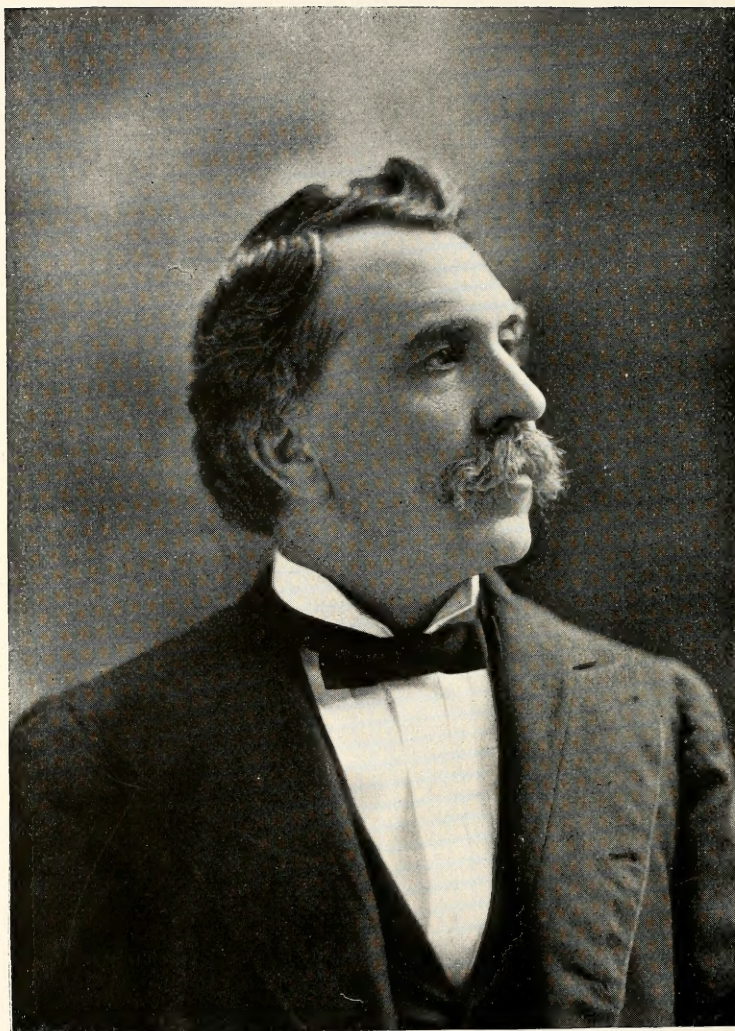
The South, published by the Watts Publishing Co., Atlanta, is the only Railway Guide in the territory south of the Ohio and Potomac and east of the Mississippi rivers. It ought to be carried in the satchel of every Southern traveller.

The Department of Agriculture, Washington, D. C., has issued a bulletin of 130 pages on "The Principal Household Insects," with a chapter on "Insects Affecting Dry Vegetable Foods."

The Cotton Belt Route has had published a series of attractive pamphlets, beautifully illustrated, which set forth the resources of the States of Arkansas, Louisiana and Texas, commonly known as "The Great Southwest." The pamphlets are entitled "Homes in the Southwest," "Texas," "The Truth About Arkansas," "Glimpses of Southeast Missouri, Arkansas and Louisiana," "Lands for Sale Along the Cotton Belt Route." One of them, "The Truth About Arkansas," is a republication of an article published in the "Southern States" for February, 1895. These books are for free distribution, and will be cheerfully sent to any address free, upon application to E. W. LaBeaume, General Passenger and Ticket Agent, St. Louis, Mo.







H. C. MOORMAN, ESQ.,  
President Fayette County Bank, President Homeseekers' Land Co.,  
Somerville, Fayette County, Tennessee.



# THE SOUTHERN STATES.

DECEMBER, 1896.

## WESTERN TENNESSEE.

*By Albert Phenix.*

Incident to the centennial celebration of Tennessee's admission into the Union, which will occur next year at Nashville with greater elaboration than is yet generally realized, Tennessee, a veritable treasure-house of most that is best in American climate, soil and scenery, will receive a degree of publicity, of favorable knowledge abroad, greater and of more practical benefit than has been afforded by any event within the hundred years of her statehood. And there are evidences that in many quarters full advantage will be taken of the opportunity to let everybody know how varied are the attractions which Tennessee offers to those seeking locations in a new and favorable field. Already there are in many portions of the State, notably in the district about Memphis, organizations and associations whose sole aim is to secure the most desirable kind of immigration to their particular locality; the railroads of the State have organized immigration departments and inaugurated homeseekers' excursions, and altogether a somewhat general effort is being made to utilize the present opportunity to impress the charms of Tennessee upon those sections of the country whose people already have their eyes and their inclinations turned southward.

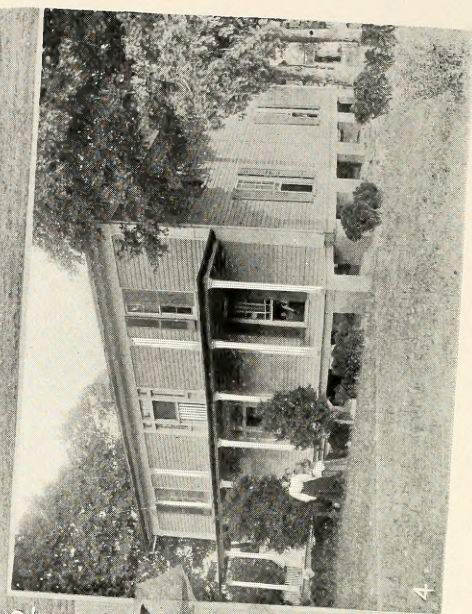
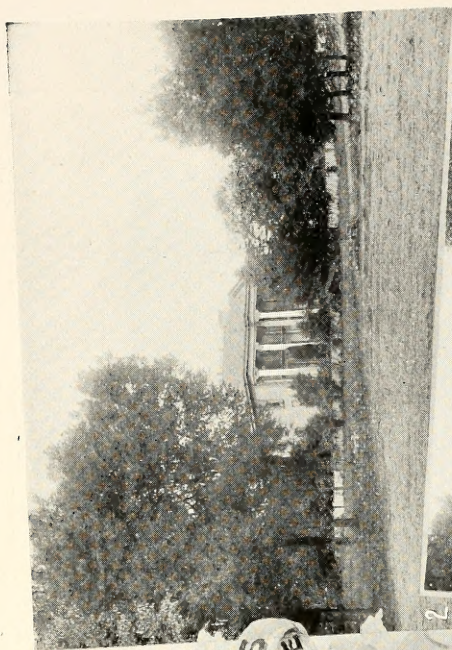
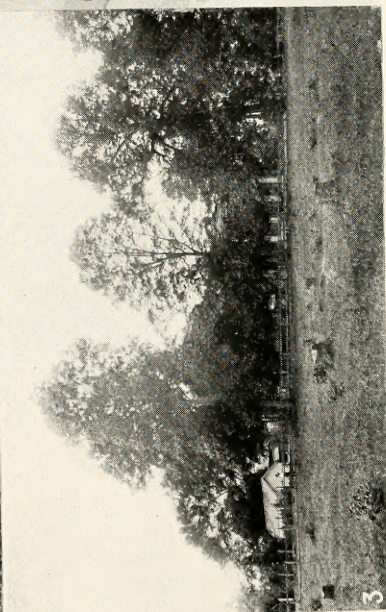
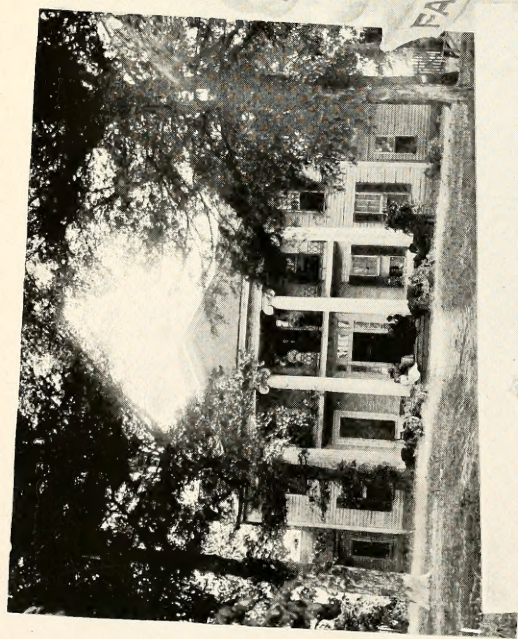
While Tennessee has always held a place of note in the romance and the tragedy, the poetry and the story of the nation, it is surprising how much of misinformation and misconception there is abroad concerning the physi-

cal conditions which affect a residence within its borders. True, "Tennessee" means much in variety of soil and climate, for that magnificent sweep of half a thousand miles from skyland to river front includes in its stretch a specimen, a combination of characteristics, elsewhere mostly met with only in widely separated sections.

While roughly speaking the State may be divided into three general sections, the Eastern, Middle and Western, its characteristics require a closer classification, for it has eight natural divisions. On the east is the mountainous division. "Here, rising in great ridge-like masses and treeless domes," says a recent writer on this section, "is the medial axis of the great Appalachian chain, the highest peaks of which attain an elevation of 6600 feet above the sea. Upon the brows and bald summits of these lofty heights the flora of Canada and the climate of New England may be found." Its average elevation above the sea is 5000 feet, and the severity of the climate makes it the least valuable section of the State from an agricultural point of view. It has many coves and fertile valleys, however, and is rich in minerals. Its magnificent scenery is awe-inspiring, and its picturesque people have been the theme of many charming romances.

The second division is the valley of East Tennessee, between the mountains and the Cumberland table-land, the third division. The latter constitutes the coal region of Tennessee. On





HOMES  
OF  
FAYETTE  
COUNTY  
FARMERS.

1. Residence on Plantation recently bought by John Thorp, of Lanark, Ill.
2. Residence of Dr. W. J. Cannon.
3. Residence of Harry Wallwork, from Manchester, England.
4. Residence of J. M. Jones.



its west are the highlands, running from the Cumberland table-lands to the Valley of the Tennessee, and enclosing the limestone central basin, or fifth division. In this basin Nashville is situated.

The characteristics of this basin give it a similarity in some respects to the blue-grass region of Kentucky. The valley of the Tennessee forms the next natural division, and then comes the plateau of West Tennessee, a section entirely different in many respects from any other in the State. A gradual slope from the Tennessee river westward, it terminates abruptly in a series of bluffs overlooking the Mississippi bottoms, which form the eighth natural division of the State.

With a difference in elevation of some 6000 feet between the mountains on the east and the Mississippi bottoms on the west, it is apparent that a great variety of climatic conditions must prevail. The rule of science is to allow, in respect to temperature, one degree of latitude for every 333 feet of elevation. According to this rule, the variety of climate in Tennessee would be represented by eighteen degrees of latitude, which would be in effect as though the State were stretched along the coast from North Carolina to Labrador.

In the better agricultural sections of Tennessee there is a combination of conditions which give them distinctive characteristics. The census returns show that every crop raised in the United States is grown to a greater or less extent in Tennessee. And on this fact much stress is laid by wide-awake immigration agents who are doing missionary work among the farmers of the North and West. It is by reason of this fact that the region about Memphis is receiving a conspicuous degree of attention in the North and West, and that the efforts of land agents and immigration agents to attract buyers to this section have met with a notable degree of success, there having been sold to Northern farmers in Fayette county alone during the past year more than 15,000 acres of land and

mostly in small tracts or for colonization purposes.

A subdivision of the Western plateau of Tennessee may appropriately be made to include a fan-shaped section, having for its point the Chickasaw bluffs on which the city of Memphis stands, and extending back in triangular shape to the Tennessee ridge. It is a fact to which Memphis owes her existence, and which has given her inalienable dominion over a vast area of country, that immediately to the north and to the south of the city the bluffs abruptly terminate, and the land assumes the same flat character which, broken only by the Chickasaw bluffs, prevails along the Mississippi from about Cairo to Vicksburg.

The territory embraced in this triangular or fan-shaped section of upland Tennessee includes a part of Shelby, Tipton and Haywood counties, all of Fayette, and is also extended so as to take in a portion of North Mississippi. As the same general characteristics prevail throughout this section, a description of the county of Fayette, which gains prominence by reason of the large number of Northern farmers who have settled there, may be taken as applicable to all of it.

It is doubtless entirely due to the fact that Northern immigrants found here conditions not radically different from those with which they were familiar that Fayette county early attracted the attention of homeseekers from distant States. As in the case of North Carolina tobacco, which was known only locally before the war, and which has since become so popular as to call into existence some big, new towns, chiefly engaged in supplying this demand, the knowledge of things here was spread abroad by the soldiers of the Union army. The memorable march from Shiloh to Memphis was through a country of such fair proportions, such attractive features, as to deeply impress the tens of thousands who for the first time were made thoroughly familiar with the singularly attractive combination of na-



ture's kindlier forces here prevailing.

Here is a section in which every cereal is grown, where the finest stock is raised, where the climate is ideal—not oppressively hot in summer and only cold enough in winter to bring reinvigoration to all nature—where there is timber land in abundance, a reliable rainfall, water of the purest quality gushing from spring and well, and where market facilities superior to those of most other sections are provided. With lands now selling at a half and a fourth less than those of

who simply desired to surround themselves with more comfortable conditions of living; and the universal testimony of these people is heartily favorable to the homes of their adoption, many declaring that under no circumstances would they consider a return to the places they left in the North. Among those who earlier came into the district are found today some of the wealthiest and most prosperous farmers in the State.

It is well enough to go somewhat into technical detail regarding this



Clover and Grass Field of T. C. Riddick, near Somerville.

equal reliable productiveness situated even less favorably with regard to the large markets of the country, it is small wonder that there should be immigration movements of notable proportions started in this direction as all the facts become known.

To Fayette county alone more than two hundred Northern families have gone during the past year; not shiftless, always dissatisfied and never prosperous people, but in almost every instance families of means and force,

portion of Western Tennessee. Topographically, it is described as "a great plain that slopes gradually toward the Mississippi river, usually with a surface gently undulating, but in some places greatly roughened by abrupt hills and sharply-defined narrow valleys. In this division there are but few rocks. The character of the soil varies greatly from the other divisions of the State, being light, porous, silicious, and for the most part ash-colored, but charged with the ele-



ments of an abounding fertility. This soil, owing to its highly pulverulent condition and the absence of rocks, is easily washed into gullies, and greater care is demanded for its preservation.

few equal it. For clover and all the cultivated grasses, including timothy, herds-grass and orchard grass, as well as the strictly Southern grasses, Bermuda and Lespedeza, the plateau of



Somerville Female Institute.

It grows all the crops of the latitude with a wonderful fecundity, but cotton and corn are the staple crops, except in its central part, where vegetables and fruits have been substituted in large part for cotton.”\*

This general description may be amplified by further fact. For instance, it gives a more thorough understanding of the resources and capabilities of Fayette county to be told that “no portion of the country is better adapted to the growth of fruits and grapes, while for cotton, corn, wheat, rye, oats and barley—and all the general crops grown in the North—no portion of the South surpasses it and

West Tennessee offers a soil and climate unexcelled North or South.”

Statements regarding the wide variety of products to which this part of Tennessee is adapted are not based on theory by any means, for the successful culture of every article named has been demonstrated by years of practical effort, and this fact is what gives the intending immigrant the assurance that he makes no mistake in choosing a farm in this portion of the Middle South.

If he prefers to raise grain, he can be certain of a good yield; better some years than others, of course, but a failure of crops is absolutely unknown. On any of the valley lands in this district from forty to sixty bushels of corn to the acre is the average yield.

\*“Tennessee: Its Resources, Capabilities and Development;” issued by the State Department of Agriculture, Nashville, 1894.



The growing of corn in the South will unquestionably be largely increased in the future. Diversified crops are becoming the rule in later years, and as Southern corn is rich in nitrogen, making it especially valuable for stock feeding or for meal, it is altogether probable that there will be a constantly increasing acreage of this important cereal.

Wheat, oats, rye and barley are grown to greater or less extent all over the State, and on suitable soils, such as are found in many parts of Western Tennessee, the yield is sufficient to justify greater attention to these cereals.

The opportunities for the profitable development of the live stock interests of this section never fail to impress even the casual observer. While there are those now who devote them-

stock thrive here and can be raised for hardly more than half it takes to bring them to market in the North, it is apparent that proper management alone is required for very profitable operations; and the wide field for such undertakings is shown by the enormous annual imports of meat products from the North and West.

The finest kinds of blooded horses, cattle and sheep are bred and profitably raised here. No branch of stock-raising offers more attractions than the raising of mutton sheep, with wool as a side issue. The spring lambs of this section are put on the markets of the North much earlier than any other part of the country supplies them, and of course command a price accordingly. Already a number of farmers are extensively devoting themselves



Building of the Fayette County Bank, Somerville.

selves largely to stock-raising, yet the field is scantily occupied. With a climate requiring very little winter feeding, with fine grazing lands, and considering the fact that all kinds of live

to sheep-raising, but instead of filling the field, they simply serve to point out the opportunities for a very extended development of the industry.

The raising of hogs, which thrive



well and are brought to market for much less than they can be in the North, will certainly attract greater attention in the future than it has so far.

Dairy farming is another branch in which what has been done hardly more than indicates the great possibilities which exist. This industry has been by no means neglected in this section, as manifested by the fact that a dairy convention was held at Jackson, Tenn., as long ago as 1884; but with the increase in population and the improvement of transportation facilities much greater opportunities

many points in Iowa, while in addition to this great market are St. Louis, Louisville, Cincinnati and many other important points, not to mention Memphis, in which of course there is always a large local demand. The railroads, led by the enterprise of the Illinois Central, have provided a perfect system of fast through freight lines, with refrigerator cars, and as the early products of this section reach the North when the markets are "bare," the prices obtained are ordinarily very remunerative.

Large quantities of all kinds of veg-



A View of Loosahatchie River, near Somerville.

than have been taken advantage of still exist.

Truck farming is already a feature of this section, and Shelby county is one of the largest potato-growing counties in America, probably leading all as a producer of second-crop potatoes. The certainty of a good market for early vegetables has induced a very large development in this industry. It is hardly realized by the outside world how near are the big markets, even Chicago being no further from Memphis than it is from

etables are thus raised in this section, and with discriminating care and judicious management a much more extensive devotion to the enterprise would bring excellent returns. The idea so strongly advocated by the "Southern States" of establishing canning factories in every section of the South where fruits and vegetables are raised is particularly applicable to the Memphis district, for soil and climate make truck and fruit-raising here an easy and ordinarily profitable undertaking, and with canning factories to



utilize surplus crops, and to absorb the entire product should later crops meet with unfavorable competition abroad, there might be an almost indefinite development of the trucking and fruit industries.

In many fruits Western Tennessee has been famous for some time. The early strawberries, raspberries, peaches, summer apples and grapes of this section have a particularly delicious flavor, which makes them favorites in the markets of the North, and there is always a good demand at remunerative prices for the entire product. Grapevines grow wild in profusion, showing that natural conditions are entirely favorable to their culture, and the climate is especially adapted to developing a high degree of quality and flavor. There are possibilities for a much bigger future to the grape industry in Western Tennessee.

Some idea of the present importance of fruit and truck farming in this section, but partially developed as it is,

may be gained from a statement made by the late Judge Pitkin C. Wright, in a recent issue of *The Middle South*: "Along one of the railroads of West Tennessee is a stretch of country eighty miles long by a half-dozen wide where truck farming is practiced, wherein are eight banks, 80 per cent. of the stock of which is owned by the farmers, and in one locality \$350,000 was paid last season to the women and children for picking and packing berries and fruit."

Poultry, the eggs and chicken crop, though individually a small interest, as a rule, is in the aggregate one of the biggest industries in this country, the value of the total product exceeding that of cotton. Chicken-raising in the vicinity of Memphis is a very profitable undertaking, there being a constant demand at that point for eggs and chickens at figures which justify the farmer in giving serious attention to this industry.

Regarding transportation facilities,

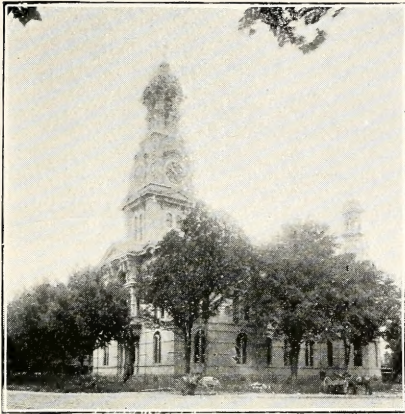


Clover Field in Fayette County.



of so much importance to any community which has anything to sell away from home, the entire Memphis region is particularly blessed. While the war stunted all railroad development in the

Cincinnati and Nashville above to Memphis, Birmingham, Montgomery, Pensacola and New Orleans to the south, passes through Fayette county on the north. The Nashville, Chattanooga & St. Louis, a live line, and in the hands of people who believe in developing the country through which they run, almost bisects the centre of



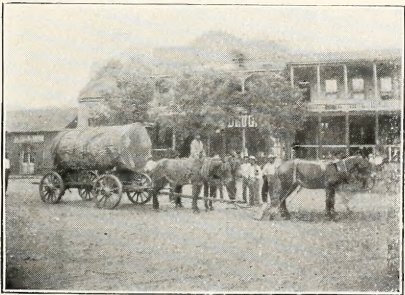
Fayette County Courthouse.

South at the same time that it wonderfully stimulated railroad building at the North, and following that the West, so that many sections of the South are even today without adequate railroad facilities, the country about Memphis can claim exemption from this rule, for competing lines traverse the territory in all directions, with the result that both service and rates are highly advantageous to the producer. Of the seven roads which enter Memphis in Tennessee, passing through Shelby

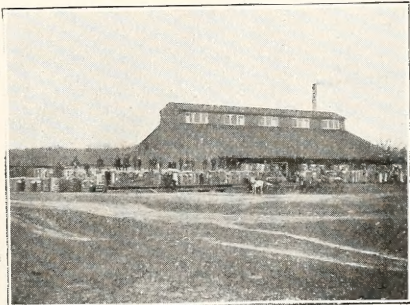


Office Homeseekers' Land Co., Somerville.

Fayette county, giving direct service to Nashville, Chattanooga and Atlanta, at which places connections are made with the great trunk lines of the country. The Memphis & Charleston road, once a branch of the East Tennessee, Virginia & Georgia, and now enjoying a close traffic arrangement with the Southern Railway, passes through lower Fayette county on its way from Memphis to Chattanooga, and has a branch line from Moscow to Somerville, which gives it a larger



A West Tennessee Saw Log.



Cotton Compress and Warehouse.

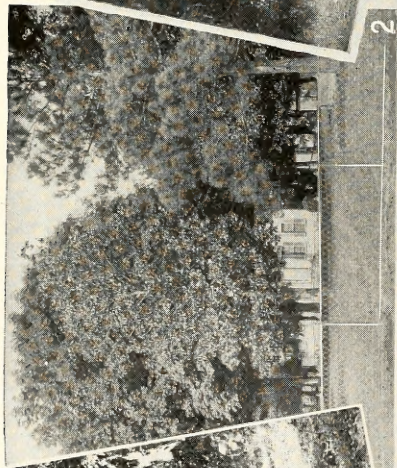
county, four of them give to Fayette county a direct service in all directions. The Louisville & Nashville, with its great network of connections, and stretching from St. Louis, Louisville,

mileage in Fayette county than any other road. Crossing the southeastern portion of Fayette county is the fourth road, the Illinois Central, the pioneer in Southern immigration movements,

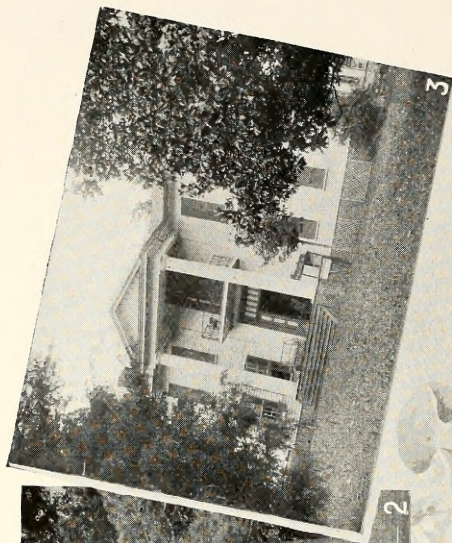




1. Mrs. L. J. Cocke.  
4. Dr. T. B. Yancey.



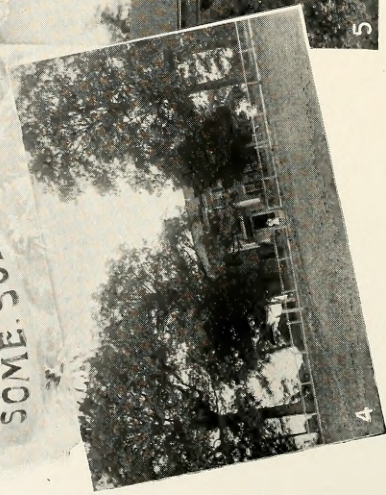
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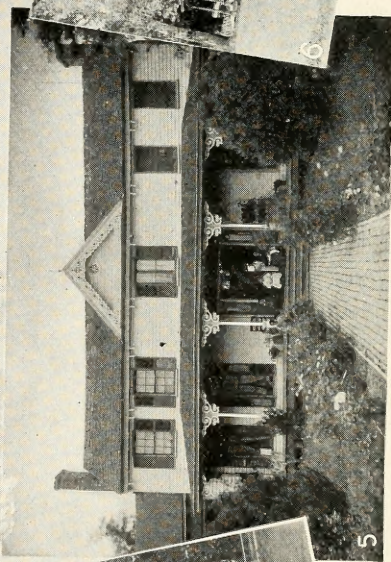
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# SOME SUBURBAN RESIDENCES, SOMERVILLE,

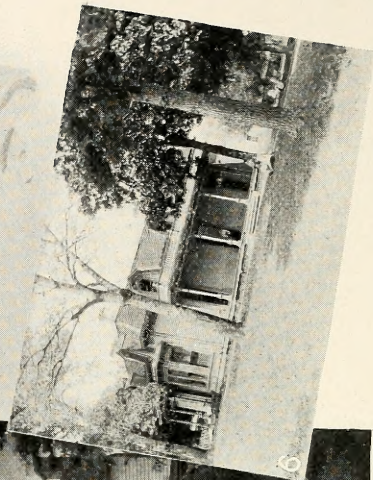
## TENNESSEE.



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3. Mrs. E. V. Pulham.  
6. H. C. Moorman.

2. T. K. Riddick.  
5. G. C. Rhodes.



the great North and South thoroughfare, the through line to all the larger Northern markets. These railroads give the farmers of the section peculiarly advantageous facilities, and afford the people of a large portion of Fayette county a choice of two convenient routes, and as competition can never be destroyed here, a permanency of equitable freight rates is guaranteed for all time.

The climate and health of the South are naturally subjects of inquiry, if not apprehension, by Northern people. Too much emphasis, therefore, can hardly be laid on the indisputable facts contained in government records. Among all the States, Tennessee stands in the front rank as to salubrity of climate, there being fewer diseases arising from any immediate unhealthy surroundings than in any other State. Except on some of the very low lands of the river bottoms, there are no malarial diseases or fevers. There are few pulmonary troubles, people from the North afflicted with these diseases almost invariably finding relief or cure. The healthfulness of the plateau of West Tennessee is indicated by the fact that Memphis stands fifth in low death-rate according to the reports of the United States census. People generally very well understand that there is no danger whatever from visitations of yellow fever, but it may be well enough to emphasize this fact with the statement that no yellow fever ever originated anywhere in the United States, and that improved quarantine regulations have for almost twenty years prevented the importation of any cases. New York once had as bad an epidemic of yellow fever as any Southern city, and there is now no more danger of a visitation in the South than there is in Chicago, Kansas City or Cleveland. With its exemption from keen cold and sudden violent changes in the temperature, the South offers conditions especially conducive to good health and to long life, and the census reports bear confirmatory proof by showing that the Southern States

are much more favorable to longevity than are the Northern States.

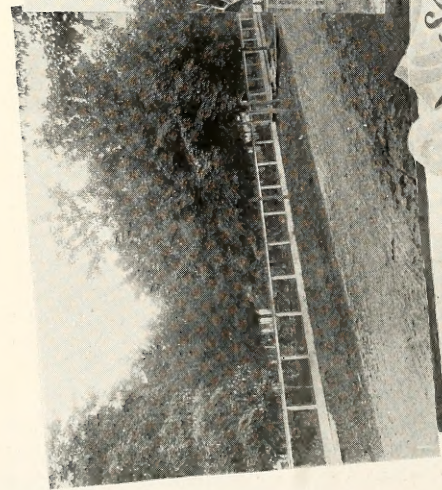
The supposed violence of the summer sun in the South is one of the fallacies more widely existent than any other error regarding the South. While it is true the summers are sometimes hot, and they are always long, the extreme temperature in most places is scarcely greater than in places 500 miles north, and interesting comparisons may be made most any warm day in summer between the United States Weather Bureau records of temperatures in half a dozen Southern cities and as many in the East and North. Temperatures greater than 98° are very rare in most places in the South, and in the Memphis district during twenty-seven years' observations the mercury has reached even 100° only some half-dozen times. The fact that heat prostrations are so rare as to be almost unknown down South; that during the phenomenally torrid spell of August this year, while thousands of people were dying all over the North, there were less than half a dozen fatalities reported from any city of the South, shows conclusively that the Southern summer sun is far less oppressive than is popularly believed, and that danger from death-dealing rays is almost infinitesimally small below Mason and Dixon's line.

The average annual mean temperature of Western Tennessee is 59°, and the lowest average point reached is 17°. According to the testimony of the late Judge Wright, plants bloom in the open all the year. He says he has gathered flowers from his garden in Somerville every month in the year, and has never failed to lay beside his wife's breakfast-plate a bouquet gathered from his own yard every Christmas, New Year's, Washington's Birthday and on her own birthday, occurring in April.

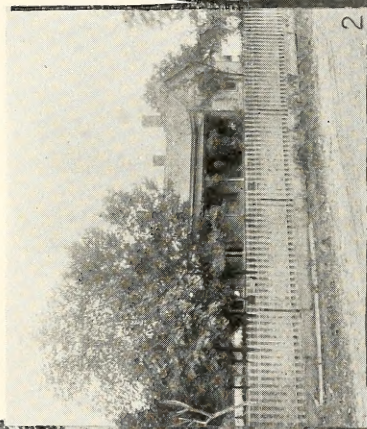
The length of time from late spring to early fall frosts averages about 190 days, giving the farmer ample opportunity to mature all crops and to raise at least two of many crops each season.

A point strongly impressing itself

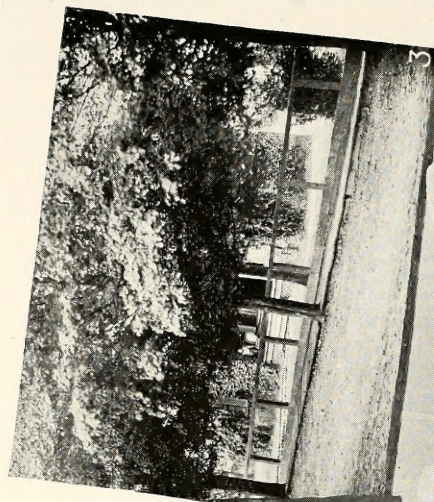




1. Mrs. M. J. Harris  
4. J. H. Dortch.



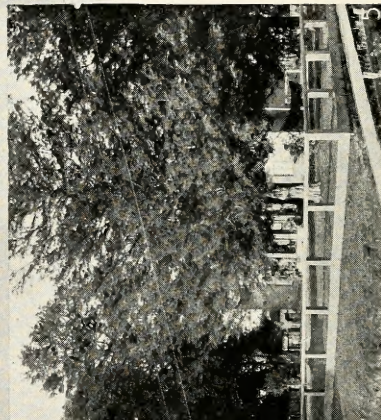
2. Dr. W. B. Granbery  
5. Thomas Williamson.



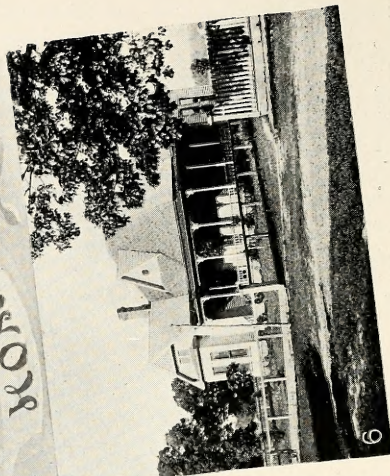
3. A. J. Rocks.  
6. Mrs. C. A. Stalnback.



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SOME SOMERVILLE

ROCKS



on all Northern farmers is the fact that with the few months of really chilly weather in the South, and the long season in which crops will grow, he is not compelled, as he is in the North, to raise in five months sufficient supplies to carry himself and family through seven months of cold and uncomfortable weather, to prepare himself for which it requires about all he can raise. Both in the matter of food and clothing there is ease and comfort in Southern conditions; in the North it is a continual struggle with adverse elements. With a soil adapted to the culture of nearly everything grown in America, where cattle and live stock of all kinds are entirely thrifty, where health and genial climate prevail, where flowers and foliage in profusion grace each home and farmhouse throughout a great portion of the year, where better rewards come with less toil, the wonder is not so much that there should be heavy immigration from the treeless, desolate, wind-swept space of the Northwest, but rather that it should have been so long in coming, and even now requires the efforts of immigration agents to help it along.

Of interest to all, but especially so to the women of the household, is the question of social conditions in the South, and the kind of a reception Southerners accord to the Northern immigrant. The intensity, the impulsiveness of the Southern character, and the overshadowing prominence the newsgatherers in the South have foolishly given to even the smallest act of violence, have in many quarters lodged an estimate of the spirit of Southern society wholly at variance with the facts, as everyone who has had opportunities for personal observation will testify. The truth is that no more gracious, God-fearing, law-abiding people can be found than those who constitute the spirit and essence of Southern society. In town and country alike, culture and refinement are universal characteristics of the Southerner, while the proverbial generosity and hospitality of the South is extended to every Northern family that

is worthy of a welcome anywhere. It is growing late in the day to make even a casual reference to the fact that sectional animosities are very dead in the South, for within recent years there have been scores of public occasions wherein before all the world a spirit of reunited brotherhood and reconciliated Americanism has been displayed as strong and deep as that which fired the patriot heart and bound all Americans together at the battle of Bunker Hill. The right hand of fellowship has long been extended to the Northern immigrant, and he must have something more disqualifying than birthplace or war record to fail in receiving manifestations of the kindest interest and sincerest regard.

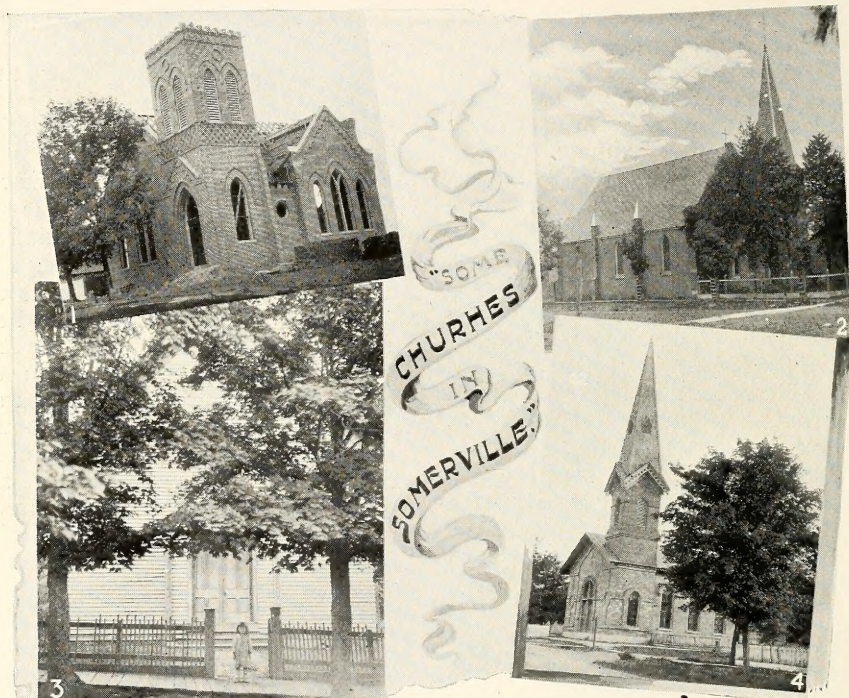
It must be remembered that the civilization of the South is one of the oldest of the country, that culture and refinement have been the heritage of many generations. The academies and universities of the South have been famous for more than a hundred years, and travel and familiarity with the world at large have always been characteristic of the average Southern family.

The South has furnished in every time a rich quota of story-writers and poets, in a large degree the expression of a spirit of liberal culture well-nigh universal. The illiterates of the South are mostly found in isolated and almost inaccessible communities, people who are out of touch with the progress of events, and who are in no just sense at all entitled to be considered types of Southern civilization. The moonshiner and the marauder are as much an excrescence here as are in their localities the Molly Maguire of Pennsylvania and the anarchist of Chicago. The typical Southerner is revealed in his laws, and here is shown an almost Puritanical adherence to the moral code. Local option results in prohibition in many places and in strict regulation of the saloon in all, and the Sabbath is so universally respected that at the Atlanta Exposition it wasn't even proposed to keep the gates open on Sunday.



There is an exclusiveness of a kind, to be sure, for the South has no welcome for the un-American, anarchistic peoples of some portions of Europe; she prides herself on her Americanism, and desires as immigrants only those who are in sympathy with American institutions; but to all these, to the Northern family, whether headed by a Union soldier or not, who have the esteem of their neighbors anywhere, the warmth of her welcome is entirely

tion is simple enough. In many of the more desirable sections of the South there was, up to the war, an ever-increasing tendency to concentrate the land-holdings into few hands. As a planter's slaves increased, he required more ground, and had to have it in the South, and the consequence was that small farmers were induced to sell as fast as their lands were desired by neighboring planters, and they sold and moved away. There was no at-



1. Presbyterian (now building).  
3. Baptist.

2. Episcopal.  
4. Methodist.

commensurate with the open-handed hospitality which is proverbial of the South.

The low prices of Southern farming lands are difficult to understand by many who are just beginning their investigations of Southern conditions. Why good lands should be offered for from \$5 to \$25 an acre, convenient to railroads and not many miles from such a city as Memphis, is somewhat in the nature of a mystery to the average Northern inquirer. The explana-

tempt made to induce immigration to the South; not only that, but every influence was against immigration, being even strongly in favor of getting rid of the small farmers already owning land there. With the emancipation of the slaves, the large planters found it unprofitable to cultivate their big farms, and many of these have remained only indifferently cultivated and altogether unsatisfactory holdings to this day. Owners are now recognizing that smaller farms, better han-



dled, will pay more money on the investment, and the advantage of having a well-settled community is becoming generally recognized as an economic fact. There being hundreds of thou-

abundance of the best water; with timber lands better than anywhere else in the country; with immunity from cyclones and tornadoes; with a stable and exalted type of civilization, it is no



Memphis: Main Street looking north, Grand Opera House and Chickasaw Club on the left.

sands of acres of these kinds of lands in the South, the period of their demand by outsiders being recent, and the proportion taken by newcomers being yet small, it can be readily seen that present conditions are altogether due to an accidental combination of circumstances incontestably ephemeral.

The possibilities of agricultural development in the South is a theme to inspire the enthusiasm of any competent beholder. With soil and climate which make possible the cultivation of about every crop raised outside of the tropics; with lands of fine quality at cheap prices; with all the advantages of a regular and adequate rainfall; with a working season extending over the whole year if desired; with an

occasion for surprise that farmers in the North and West are turning their attention to the South, and are finding in the Memphis district conditions that enlist their enthusiastic praise. This section suits the Northern farmer, and those who have located here are, with few exceptions, doing well.

There has been particularly a large immigration into Fayette county, which is the next county east of Shelby, in which Memphis is situated. People from all the States of the Central North and Northwest have bought homes in this county, and are well pleased that they have cast their lot in a section where they can grow not only cotton, fruits and vegetables, but all the general crops of the Northern farmer and stock-raiser as well.



In a consideration of this region some interest attaches to Somerville, which enjoys the distinction of being the only town in Tennessee within a hundred miles of Memphis which has competing lines of railroad into Memphis. Somerville is an old and interesting town of some 1200 population, and has since organization been the county seat of Fayette county. It abounds in homes of the old-fashioned Southern type, and its people are conspicuous for their hospitality and refinement. The academies and schools of Somerville reflect the culture of her people, and have an honorable history dating back almost half a century. There are some very handsome public and business buildings, and the wealth of foliage everywhere abounding gives

considerable territory, an advantage taken into consideration by settlers looking for a desirable location. It is on the main line of the Nashville, Chattanooga & St. Louis Railroad, connecting it with Memphis on the west and Jackson, Nashville and Chattanooga on the east and Paducah, Ky., on the north. This is one of the foremost roads in the South in the work of securing immigration. Without an acre of land of its own, and without any direct interest in the sale of any lands, it has organized a comprehensive plan of immigration work, and has placed at the head of this department Col. J. B. Killebrew, a wealthy stock-grower and planter of Tennessee, who by his work as a former commissioner of agriculture for Tennessee,



Memphis: Postoffice.

a picturesque setting to all the houses of the town, business as well as residence.

Somerville's railroad facilities give it prominence as a trading centre for a

see, and as an exhaustive and scientific student and writer of Tennessee's resources, has achieved a distinction which places him in the front rank of authorities on the State's resources and



capabilities. Colonel Killebrew is doing an important work among the farmers of the Northwest, where he lectures and spreads information and dissipates misconceptions and ignorance about Tennessee and the territory covered by the railroad he represents. He has made some notable tours of the Northwest, and being careful to tell only the truth about this section, his labors have resulted in much practical good, evidenced by the settlement of hundreds of families in the territory referred to, and in the dissemination of information which will bear results yet beyond those which have already induced immigration.

The importance of this kind of work can hardly be overestimated. The Southern Homeseekers' Land Co., of Somerville, Tenn., organized to sell lands to outside settlers, has engaged in a similar line of endeavor, spreading literature broadcast and sending representatives into regions where immigration is a probability, with the result that hundreds of families have been attracted to the vicinity of Somerville already, and the company feels that the work accomplished is hardly more than a promise of achievements yet to be made.

Somerville's other railroad is the Memphis & Charleston, which affords it additional communication both with Memphis and Chattanooga. This road is at present handicapped by being in the hands of a receiver, but it has made such efforts as were possible to attract immigration, and as it is a fine line, running through one of the best portions of the South, it will unquestionably be an important factor in the future development of the region. A general impression is to the effect that the great Southern Railway system will ultimately absorb this road, giving that system another valuable Western feeder and putting new life into all the territory through which it runs.

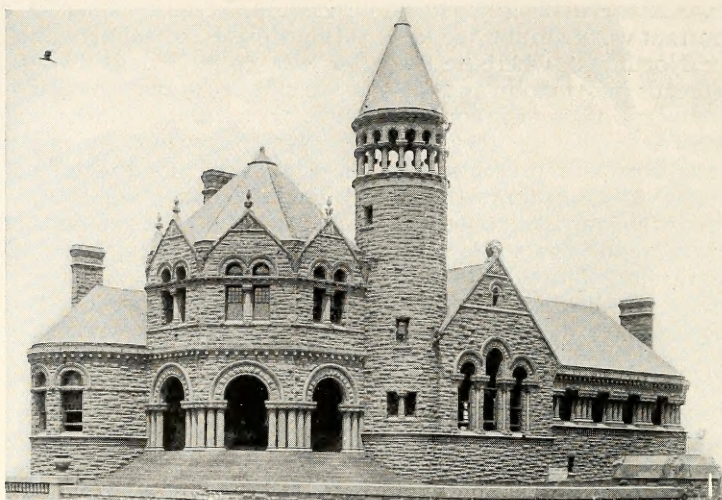
Somerville has excellent banking facilities and a number of business houses and industries, but there is room for a variety of other undertak-

ings. As Western Tennessee contains heavy forests of timber, one-third of Fayette county alone being covered with a fine growth of hard woods, there are a number of plants along the wood-working line which might yet be established here to good advantage. Somerville is a good cotton market, and various other conditions offer suggestions as to possible industrial development.

Among the progressive and public-spirited citizens of Somerville, one of the foremost is Capt. H. C. Moorman, who is president of the Fayette County Bank and of the Southern Homeseekers' Land Co., of Somerville.

Memphis, the great commercial centre of this entire section, and in many respects one of the most important cities of the South, occupies the site where Ferdinand De Soto stood and first of all white men gazed from the Chickasaw bluffs down upon the mighty Father of Waters. It was many years after this venturesome Spaniard had crossed over the river he had discovered and disappeared in the swamps beyond before any white settlement came to occupy the place designed by nature as the site of a big city; and even yet the manifest, logical destiny of this location lacks much of fulfilment. Memphis has about 100,000 people, and the investigator who studies her advantages of location will find himself wondering not why there are so many, but why there are no more. It was not until 1819 that a town was laid out at all, although there had been here an Indian settlement and later a Spanish fort. But in 1820, when there were less than 100 inhabitants in the new city, a Northern prophet published a "boom" pamphlet about Memphis, in which even more than the development which is now here was declared in detail to be inevitable. Nothing could have prevented there being an important city where Memphis is located any more than it could have kept Manhattan Island from becoming a city; but each site remained unoccupied for some time after its discovery. With the inauguration of





Memphis: 1. Cosett Public Library. 2. Lyceum Theatre. 3. Tennessee Club.



steamboating on the Mississippi, Memphis began to assume importance as a trading centre, and soon became the most consequential city between St. Louis and New Orleans. With the passing of the palmy days of steamboating and the inauguration of the railroad era, Memphis showed her ability to adapt herself to changing conditions, and she now has the finest system of competitive railroads in almost any Southern city. A railroad bridge, one of the few that cross the Mississippi river, and the only one below St. Louis, links her to the destinies of the West and Southwest, and promises an aid to great future development to come with the settlement of the Arkansas bottom lands, now lying so generally undeveloped just across the river, almost in her front yard.

The Memphis of today has a bright, alive look, more typical of the cities of the Northwest than of the usual old city of the South. With its handsome new public and business buildings, its recently paved streets, its swift, busy electric-car-line service and a preponderance of active young men in business, it makes a strikingly favorable impression on the visitor from any section of the Union. It somehow reminds one of a sturdy youngster, freshly scrubbed and newly befrocked. It does not give one the impression of staid, prim conservatism, for there are crudities apparent in many things; it does not have the appearance of a "finished" city, in which nothing more remains to be done, but die; it rather suggests a comely, vigorous youth, full of strength and full of promise. And investigations justify this conception. With a large, fertile and but partially developed territory east of the river to draw from, and with a vast territory on the west which has yet to experience any really important development, its future growth is difficult to measure. It is already the largest inland cotton market in the world, and yet has no cotton factories. It is, however, largely engaged in cottonseed-oil manufacturing, ranking next to New Orleans as the most im-

portant point in the country in this regard. With the exception of its lumber interests, the cottonseed industry of Memphis is the largest single manufacturing industry. There are six cottonseed-oil mills in Memphis, representing an investment of \$750,000. They utilize the cottonseed of all the section east of the Mississippi tributary to Memphis, including the cotton districts of West Tennessee, Mississippi and a portion of Alabama, and consume about 100,000 tons of raw material a year. Employment is given to 500 hands, and the annual product is valued at over a million dollars. The rise of the cottonseed industry, now occupying a position of so much importance in the South, is particularly interesting and important, for the reason that whereas the seed was once a waste product, every part of it is now utilized. The oil is recognized as a stable product, selling on its merits, and regarded as an edible fat but a little less desirable than olive oil for table use; it is also largely used in the manufacture of soaps and the heavier oils, and even with adulteration for lubricating purposes. Oil cake is next of importance in products. It is chemically rich in fat and protein, making it a valuable food product for animals. The cotton clinging to the seed is carefully combed off, making what is termed linters, which is utilized in carpet weaving. The hulls from the seed also form an important food product, contributing a perfect rough fodder to be fed with the meal or any other rich food. Even the ashes of the hulls, when burned, are utilized, as they form one of the richest potash-bearing materials known.

Memphis is surrounded by dense forests of hard wood, and is the largest hard-wood lumber market in the world, and is only second in the United States as a lumber market of all kinds. There has been a greater development of industries along this line than in the utilization of her other resources. A number of Northern and other operators have located in the city and in the Memphis district within recent



years and engaged in the manufacture of furniture and various kinds of wood products; but much of the timber is still shipped as lumber, and in accordance with the economic law that factories must go to the raw material, it is inevitable that Memphis must immensely extend her operations in all kinds of woodworking establishments.

Cotton and lumber may be said to be the great products of the Memphis district, but from the preceding narration of the wide diversity of agricultural products to which this section is

mous market for all kinds of produce, a large part of which is now shipped in from points outside the Memphis district. The estimate is made that \$7,000,000 is annually paid for Northern products which might be raised in this district, which gives a promise for an almost indefinite development of home resources. Memphis is the seventh largest grocery market in the Union, and in proportion to population the first. Her jobbers are in the main aggressive and alert, one of the houses sending out nineteen men, another fif-



Memphis: View from the top of Continental Building (twelve stories).

adapted, it is evident that there are great possibilities in many directions. For years Memphis has been a large shoe market, but has just begun to manufacture them on anything like a large scale. There were 6,000,000 pounds of fresh meat shipped into Memphis from the North and West last year. May not cattle-raising on a more extensive scale, a home packing house and a tannery be among future possibilities here?

Memphis is a constant and enor-

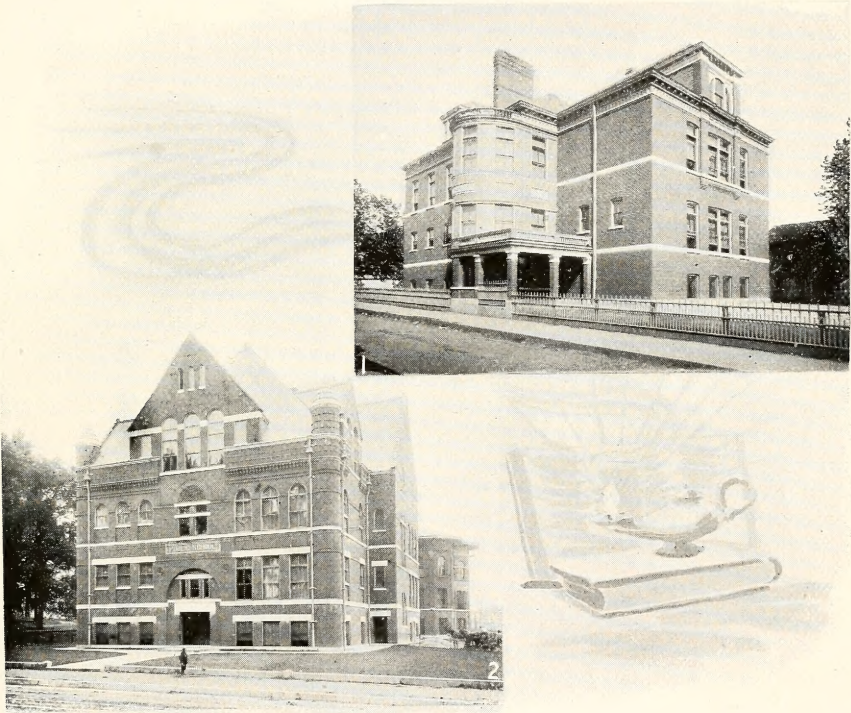
teen, and covering a wide area of country. Conspicuously in this item, but affecting to a greater or less degree every branch of business, the unexcelled transportation facilities of Memphis are a deciding factor in giving her an advantage over competitors. She has eleven lines of railway, radiating in every direction, and giving her direct communication with every important city, East, West, North and South. Such roads as the Illinois Central, the Louisville & Nashville, the Kansas



City, Memphis & Birmingham, the Cotton Belt route, the St. Louis, Iron Mountain & Southern, together with the Tennessee roads, the Memphis & Charleston and the Nashville, Chattanooga & St. Louis, are among the lines which give to Memphis her superiority as a railroad centre; and added to these transportation lines, acting forever as a bulwark against unfavorable freight rates, is the great Mississippi river, with Memphis as the head of winter navigation. Some

of freight and 10,000 passengers are annually carried on the Mississippi, and that the earnings of the 8000 boats of various kinds employed in the carrying trade amount to some \$17,000,000 a year.

Statistics concerning the trade of Memphis show that the total volume of her business amounts now to about \$140,000,000 annually. Of this sum, about \$75,000,000 represents the aggregate jobbing trade. The trade in cotton amounted last year to \$17,-



Memphis: School Buildings.

eleven lines of steamboats are maintained out of and into Memphis, which is and will forever be the principal river point between St. Louis and New Orleans. While the romance has gone from the river, and the picturesque old days of steamboating on the Mississippi will never return, yet it still continues no mean factor in the commerce of the nation, and as a regulator of rates will always be of incalculable benefit to the cities upon its banks. The railroads are supreme today, and yet it is estimated that 30,000,000 tons

000,000. The grocery business comes next with an aggregate of some \$20,000,000 annually. The wholesale dry goods business is estimated at \$6,000,000 a year; the hardware business at \$3,000,000; the boot and shoe business at about \$2,500,000.

The figures available with reference to the value of the lumber product give only a partial idea of the extent of this industry. It is reported that "the lumber manufactured and the total dealings in lumber and lumber products at Memphis aggregate 160,-



000,000 feet a year, of the value of \$2,250,000," but these figures give no idea of the great volume of operations in this line in the Memphis district, in which there are some 150 of the largest saw mills in the country. The roads centring in Memphis haul 40 per cent. more cars of lumber than cotton, and freight revenues are also larger for lumber than for cotton.

The manufacturing interests of Memphis are represented in some 450 enterprises, with a capital of about \$5,000,000, employing 10,000 hands, and annually turning out products worth about \$12,000,000. There has been an increase of more than 400 per cent. in the manufacturing interests of Memphis since 1880, and the cheapness of fuel, unsurpassed transportation facilities and favorable conditions of every kind promise greater developments in every line of industrial activity. The coal trade of Memphis amounts to about \$2,000,000 a year. The supply comes principally from Alabama, though Kentucky, Tennessee and Pennsylvania coals are sold on the market. The price to manufacturers is \$1.90 per ton. As living is cheap, labor is obtainable at prices favorable to manufactures, and the mildness of the climate permits operations continuously throughout the year.

The matter of climate and health is naturally one which first receives the investigation of the outsider, for the fearful scourge of yellow fever which well-nigh depopulated Memphis in 1878-79 is remembered by many who know nothing else of the city. A very little investigation is all that is necessary to convincingly show that not only is yellow fever a thing of the past in Memphis and the whole South, but that Memphis is today so free from all disease-producing conditions that she stands well up in the front rank of the healthiest cities in the United States, her death-rate being only 16.36 per 1000 of the entire population, white and black. The national quarantine law, passed in 1893, makes the future importation of yellow fever practically

an impossibility. Immediately following the epidemic, a thoroughly scientific and complete system of sewerage was begun, and today the city has over sixty miles of sewers and as perfect a sanitary system as any city of the country. The city water supply is obtained from a series of artesian wells, the water from which, according to chemical analysis, is of singular purity and healthfulness.

As a matter of fact, the health sentiment and the sanitary regulations in Memphis are exceptionally stringent, and the fact that the big life insurance companies of the East now have agents in Memphis soliciting business throughout this once prohibited district is the most substantial proof possible that the healthfulness of this district will bear the strictest tests.

The climate of Memphis is a happy medium between extreme heat and extreme cold. Half a dozen times in twenty-seven years the mercury has gone over 100°, but the average annual maximum is 97°. In winter, zero weather is rare, the annual average minimum being 12°, giving an average annual range of 85°.

It is always interesting to know about the financial institutions of a city, and Memphis takes pleasure in pointing to the fact that her banking houses weathered the storms of the past three years in such a way as to gain the confidence of the financial world. With one unimportant exception, there never was a time when there was the least doubt about the standing of any of them. There are sixteen institutions, including savings banks. The capital is \$5,500,000, surplus about \$2,000,000, and average deposits about \$11,000,000.

The total taxable valuation of the city is about \$65,000,000; the tax rate, \$1.75; the bonded indebtedness, \$3,180,000.

An evidence of the growth in the business of Memphis is given by the postoffice receipts. In 1885 the Memphis postoffice handled 6,500,000 pieces of mail; in 1895 it handled 30,000,000 pieces. In 1885 the stamp and



envelope department sold \$75,000 worth; in 1895 over \$160,000 worth.

As an indication of the activity of Memphis business men in various directions, it is worthy of mention that there are eight local fire insurance companies in Memphis, with a combined capital of over a million dollars. They are all reported as prosperous, and one of them, the Planters, which has a building of its own, has declared dividends of some 175 per cent. since beginning business about thirty years ago, in addition to paying losses amounting to over a million of dollars.

Since the life insurance companies have gone actively into this field, one of them, the Equitable, has purchased a large and valuable office building in Memphis, which is the only instance so far, so Manager R. P. Lake states, where a foreign company doing business in Tennessee or Mississippi has invested largely of its own money in local real estate.

The newspapers of Memphis, which with marvelous good fortune are just two, a morning and an evening issue, still further confirm one's good opinion of the city and its people. They both

have roots in the long past, albeit both are now in comparatively new hands. The Scimitar is a bright, clean evening paper, espousing the cause of democracy as promulgated by the Indianapolis convention. The Commercial-Appeal, a survival of all the others, including the one-time Avalanche, is a particularly ably-conducted morning paper, breezy and interesting on every page, with a large constituency, which it seems to please by an ardent advocacy of Mr. Bryan and his platform of 16 to 1.

It is generally assumed that the visible features of a man or a town afford an index to the animating spirit within. By this rule, Memphis secures for herself the high regard of the visitor at once. Her marble custom-house and postoffice, with its well-kept grounds and striking site; her beautiful Cossitt Library; her delightful little Court Square park; her handsome theatres and clubs; her many charming residences and shaded residence streets; her imposing church edifices, and her many fine school buildings, all delight the eye and reveal a prevailing spirit of taste and culture among her people.





## THE REMAKING OF THE SOUTH.\*

*By Henry M. Holladay.*

(Continued from Last Number.)

These figures demonstrate the fact that the growth of the agricultural and mineral industries of the South has been steady and healthy. They prove that production of cotton is limited only by the demand in the markets of the world. And upon further consideration it will become evident that the peculiar advantages which the South enjoys for the production of this staple must prove a most important factor in her development and in the race for industrial wealth and supremacy upon which she has entered. It is not possible for the human mind to grasp the significance of figures expressed in thousands of millions except by comparison and contrast. A true idea of the value of the Southern cotton crop can be obtained only by setting against it the pecuniary results of human effort in other fields of labor.

Like fairy tales, over which youthful minds love to linger, are the stories which come to us of the Kimberly and Kaffir mines in the South African Eldorado. From that far-off wild land one multi-millionaire after another successfully emerges to dazzle the metropolis of the Old World with incomprehensible treasure in gold and diamonds.

For many years the nuggets of gold on the Golden Slope and the veins of silver amid the sierras of the far West allured the adventurous of every clime and every race to brave famine, thirst, disease, danger from savage beasts and savage men, the perils of stormy seas and the frosts of snowy mountains. A pyramid of glittering gold is more dazzling to the eye, more inspiring to the imagination, than soiled

bales of cotton heaped in rugged mass. But the value of each is a question of arithmetic. And in the clear, cold light of fact it will be found that the great West with its silver and gold, that South Africa with her gold and diamonds, can offer little beside the wealth with which every returning summer's sun clothes the broad rolling fields of the South. The total value of the raw cotton produced in the Southern States since 1865 can be estimated only in a rough way. But this estimate will be found sufficiently accurate to serve the purpose now in view. The estimated weights of the cotton crops for the period beginning with 1866 and closing with 1869 are taken from Spofford's American Almanac. The value of each crop is determined by the average price per pound of middling cotton for each year in the New York market. The figures for the period beginning with 1870 and closing with 1895 are taken from the statistical abstract prepared under the direction of the Secretary of the Treasury and are for farm values.

### PRODUCTION AND VALUE OF COTTON CROP FROM 1866 TO 1869 INCLUSIVE.

	Bales, equal to Pounds		At 43 cts.
1866	.... 2,193,987	965,354,280	\$415,102,340
1867	.... 2,019,774	888,700,560	At 31½ cts. \$279,940,676
1868	.... 2,593,993	1,141,356,920	At 24½ cts. \$282,485,837
1869	.... 2,439,039	1,073,177,160	At 29 cts. \$311,221,376

Total value for the four years. . \$1,288,750,229

This estimate is too high for two reasons: First, the price given is not the farm value, but is based upon the price in the New York market; in the second place, it is too high, because of the paper money inflation at that time. For the moment, however, we

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may let that pass. For the last twenty-six years we have official estimates, which are as follows:

FARM VALUE OF COTTON CROP FROM  
1870 TO 1895 INCLUSIVE.

1870	.....	\$303,600,000
1871	.....	286,000,000
1872	.....	288,300,000
1873	.....	301,087,500
1874	.....	312,480,000
1875	.....	256,215,000
1876	.....	272,936,400
1877	.....	229,444,600
1878	.....	205,000,000
1879	.....	193,854,641
1880	.....	242,140,987
1881	.....	280,266,242
1882	.....	259,016,315
1883	.....	309,696,500
1884	.....	250,594,750
1885	.....	253,993,385
1886	.....	269,989,812
1887	.....	257,295,327
1888	.....	291,045,346
1889	.....	292,139,209
1890	.....	308,424,271
1891	.....	350,000,000
1892	.....	313,000,000
1893	.....	268,000,000
1894	.....	263,000,000
1895	.....	262,000,000

Total value, 1870 to 1895.....\$7,119,520,285  
Total value, 1866 to 1869.....1,288,750,229

Total value, 1866 to 1895.....\$8,408,270,514

As has been said, the estimated value of the crops from 1866 to 1869 is too high. Against this overestimate may be set the value of the by-products of the cotton crop, including cotton oil, oil cake and cottonseed. Henry W. Grady estimated the value of these by-products at \$60,000,000 per annum in 1890. Even if Grady's estimate be too great by one-half it is apparent that, after making due allowance for the inflation of values in the years immediately succeeding the war, the farm value of the cotton crop for the past thirty years may be safely estimated at not less than \$8,000,000,000.

The real meaning of a sum so vast as this can be conveyed to the human mind only by comparison. The coining value of gold produced from mines in the United States from 1792 to 1891 was \$1,904,881,769. The coining value of silver produced from mines in the United States from 1792 to 1891 was \$1,073,172,000, making a total coining value of the precious metals produced in this country for 100 years of \$2,978,053,769, or about 37 per cent. of the value of the cotton crop for less than one-third of a century.

The total coining value of all gold and silver produced in the United States for the ten years beginning with 1884 and closing with 1893 was \$965,705,332. The total farm value of the cotton crop for ten years beginning with 1886 and ending with 1895 was \$2,876,176,965. The average annual value of gold and silver produced in ten years was \$96,500,000. The average annual value of cotton produced in ten years was \$287,500,000.

The production of gold and silver for the world from 1881 to 1892, coining value, as estimated by Dr. Adolph Soetbeer and the director of the United States Mint, was \$3,000,179,000, an average annual production of \$250,000,000 for the period of twelve years. This is \$37,000,000 less than the average annual value of the Southern cotton crop for the past ten year.

Mulhall's estimate of the world's production of gold for 500 years, from 1380 to 1880, is \$7,240,000,000. His estimate of the world's production of silver for the same period is \$7,435,000,000. It appears, therefore, that all the gold mines of the world did not produce gold enough in 500 years to pay for the cotton produced in the South in the past thirty years by \$750,000,000. And all the silver mines of the world did not produce enough silver in 500 years to buy thirty crops of Southern cotton by \$500,000,000.

It is beyond dispute that so long as the sun shines and the showers descend the South will possess in her cotton-fields stores of wealth greater than the silver and gold which has poured from the mines of the great West, Mexico, South America, Australia and South Africa.

The total value of all the metallic products mined in the United States for the ten years from 1880 to 1889, and including pig iron, gold, silver, copper, lead, zinc, quicksilver, nickel, aluminum, antimony and platinum, was \$2,165,000,310, an annual average value of \$216,500,000.

The total value of all non-metallic minerals produced in the United States for the same period, including



bituminous coal, Pennsylvania anthracite, building stone, petroleum, lime, natural gas, cement, salt, limestone for iron flux, phosphate rock, mineral waters, zinc-white, gypsum, borax, mineral paints, manganese ore, asphaltum, pyrites, crude barytes, bromine, corundum, marls, precious stones, gold quartz, flint, fluorspar, graphite, novaculite, feldspar, chromic iron ore, mica, slate ground as pigment, cobalt oxide, sulphur, rutile, asbestos, potter's clay, grindstones, millstones, ozocerite, infusorial earth, soapstone, fibrous talc and lithographic stone, was \$2,461,843,320, an average annual value of \$246,184,000.

The average annual value of the cotton crop for the past ten years was \$287,500,000, as we have already seen.

The time in which we live is often spoken of as the Age of Steel. The production of steel for the world in the year 1892 was estimated at 12,808,302 tons. At \$25 per ton the total value would be \$320,207,550. The farm value of the Southern cotton crop for the same year was \$313,000,000, and when to this is added the value of cotton oil, oil cake, etc., it is evident that we might more appropriately speak of the present time as the Age of Cotton.

Up to this point we have treated cotton solely with reference to its farm value. If this were but a fraction of what it is, cotton would still prove infinitely more valuable to a community than mines of silver or gold. The necessity of large capital in mining the precious metals enables a small number of individuals to obtain control of the industry. Great fortunes are accumulated by a few men, and the majority never become anything more than wage-earners. Precisely the opposite is true of cotton. In the nature of things, its production requires the labor of a vast number of men. The immense area of land lying idle affords opportunity to men with small capital or no capital. And the industry is one which cannot be controlled by a few individuals or by any one class.

Again, the precious metals offer

little opportunity to skill and labor. When mined and smelted they are ready for the mint, and only a small per cent. of either silver or gold goes into the hands of the artisan for fabrication into works of utility, art or barbaric display. When cotton leaves the place of production it has only been prepared for shipment. It is raw material, and has only begun its beneficent mission to laboring men and women and through them to the freighter, the manufacturer, the trader and the consumer. At this stage it becomes an incentive to enterprise. It now offers a surer and a richer reward to labor, to skill and to capital than in its production. Its value is capable of well nigh infinite multiplication before it becomes a finished product. New England has been scarcely less indebted to this staple for her wonderful prosperity and growth than the South itself. The snowy harvest of Southern fields under the Midas-touch of Northern energy and skill has poured a fructifying stream of gold into the busy cities of the Puritans, and from them wealth has flowed outward and onward over the valleys, the prairies, the plains and the mountains of the great West, quickening the growth of new communities and laying the foundations of great commonwealths. Nor is its benign influence limited by the shores of our own country. It overrides geographical lines and political boundaries. It is potential in international trade and in the commerce and ocean traffic of the Western world. Its influence upon manufacturing in the United Kingdom has not been less than in the Northern States of the American Union. It is one of the corner-stones upon which have been reared the industrial and commercial supremacy of the British Empire. And so long as it continues to carry wealth into English cities it will prove more powerful for the cause of peace between the two greatest powers of the earth than all the prayers of priests and all the pratings of peace societies.

In the light of these facts it becomes evident that this one industry would



prove a factor of potential importance in the race for wealth upon which no time limit is set, even if the South possessed no other peculiar advantage over its rivals. It would be no mean record for this Nazareth of thirty years ago, even if in this one industry were summed up the labor and enterprise of the South and its contribution to the well-being of humanity. This is far from true. The value of the cotton crop is probably one-third of the aggregate annual value of the farm products of the South. The estimated value of farm products in the thirteen Southern States and the Territory of Oklahoma for the census year of 1889 was \$739,887,549. The value of the cotton crop for the same year was \$292,139,209.

If due allowance be made for the low valuation of farm products by the census enumerators, for the natural and steady growth of the country in the past seven years, and for the prevailing disposition among Southern farmers to diversify their crops, to grow more grain and to fatten more hogs, it can hardly be doubted that the cotton crop does not exceed in value one-third of the annual farm products of the South at the present time.

Years ago men of philosophic foresight, business capacity and scientific attainments recognized the great future of the South. Professor Shaler, of Harvard, expressed the opinion that iron could be manufactured cheaper in the South than in any other country except China. The late Hon. W. D. Kelly, for many years the most distinguished advocate of the policy

of protection to American industries, in the House of Representatives said: "The South is the coming Eldorado of American adventure." And Hon. Chauncey M. Depew epigrammatically described the South as "the bonanza of the future."

At that time the American people accepted these utterances as the language of compliment, prompted by kindly feeling and patriotic hope—as pardonable exaggeration, which pleased the South and excited no alarm in the North. But time has shown that the student and scientist, the political leader and statesman and the broadminded man of affairs saw with clear vision and spoke with prophetic truth. The Southern iron industry is scarcely out of its swaddling clothes, but its vigorous and lusty growth has already won it recognition as a formidable rival to the great iron district of which Pennsylvania is the centre. Enough has been accomplished to satisfy business men that the South is destined to become one of the chief producers of iron, and that it will be able to meet all competitors in the markets of the world.

The cotton-textile industry of the South has barely learned to walk alone, but with a grace as becoming as it is wise, New England bows low in salutation to the king that is to be and joins his train. The cotton-textile industry can be made more remunerative to the South than the culture of the plant. The iron industry is capable of limitless growth, and must prove no less valuable to the South than her cotton-growing and manufacturing.

[To be continued.]



## BEET-SUGAR INDUSTRY IN FRANCE.\*

A large acreage of beets is sown annually in France; and this is not to be wondered at, seeing that, even in unfavorable seasons, the crop pays the farmer better than wheat or any other agricultural product. In 1894 more than 1,700,000 acres of land were planted in beets, giving a total production of 18,400,000 tons of the root, or an average of nearly eleven tons per acre, worth about \$4 per ton for forage and the manufacture of beet sugar. From 50 to 60 per cent. of the beet root raised in France is manufactured into sugar, the yield being from 7 to 9 per cent. of the gross weight of the root. As to the expenses of manufacturing the beet sugar, that, of course, varies, but it may be computed at from ten to twelve francs (\$2 to \$2.50) per 100 kilograms (220 pounds).

### EXPENSE OF PRODUCING BEET ROOT.

The experience of French growers shows that the expense of cultivating one acre of beets is as follows:

Preparing the land .....	\$3 00
Five pounds of seed .....	50
Hand weeding and thinning .....	1 25
First working and transplanting .....	1 25
Second working and transplanting .....	1 00
Gathering and piling beets and tops.....	3 00
Total.....	\$10 00

In the above no estimate is made for the cost of fertilizers, because it is not always necessary to employ fertilizers. This depends upon the extent to which the land was manured for the previous crop. It is calculated, moreover, that the residue of leaves or stalks or litter left on the field after they have been fed to cattle will furnish much more manure than the cultivation of the beet requires. The average annual yield is shown by statistics to be from ten to twelve tons of beet root per acre of land.

\*Condensed from a report made to the State Department by Dr. C. W. Chancellor, Consul to Havre, France.

There has been less activity in beet sugar during the years 1894-95 and 1895-96 than for several preceding years, owing to the bounty paid by Germany on sugar exported from that country. Considerable quantities of the strong, low grades are purchased for the United Kingdom; but the better or medium qualities are mostly kept for the home refineries, which are, for the most part, situated at or near Paris and in the north of France. The fine, white crystallized sugars are principally taken by England, Morocco, the Argentine Republic, Algeria and Turkey. The consumption of French sugar in foreign countries might keep better pace with the production if it were not for the bounty system adopted by other European countries, notably Germany, which pays from \$1 to \$1.50 per hundred on exported sugar to encourage the industry, and at the same time increase foreign consumption. Apparently, the only effect of the plan has been to increase competition and reduce prices. A bill is now before the French Parliament providing for an export bounty on French sugar, in order to enable French manufacturers to compete more successfully in foreign markets, especially the English market, where the per capita consumption of sugar is more than three times greater than in France or Germany and six times greater than in Austria.

### ADVANTAGES OF BEET CULTURE.

There is absolutely no waste of the beet product. Every part of the vegetable is utilized and rendered valuable in one way or another, whether it be used for sugar or for forage, or the two combined. The pulp of the root, after the juice has been expressed for sugar, is eagerly devoured by cattle, and is found to be extremely nourishing. Not only the roots, but the leaves



and stalks are utilized as food for cattle, and it has been found that, especially when fresh, they not only increase the animal's fat, but also largely increase the secretion of milk in the cow. The dry leaves and stalks, when mixed with straw, afford excellent and wholesome food during the winter for cattle and sheep. Altogether, the beet root or the residue after the juice has been expressed supplies, with the leaves and stalks, nourishment for cattle and sheep more abundant, perhaps, than any other forage that could have been cultivated on the land.

It is, moreover, stated that a large profit is derived from selling the leaves to tobacco manufacturers, who prepare and mix them with the tobacco which is made into cigars and cigarettes or smoking tobacco. In France, where the State has a monopoly of tobacco, and the sale of cigars, cigarettes and all kinds of tobacco, including snuff, appertains exclusively to the government, one can hardly assume that such a system of adulteration would be practiced, though it must be admitted that French cigars and cigarettes are often notably deficient in the stimulating properties of genuine tobacco. It has been asserted that certain beet-growers realize enough from leaves sold for tobacco to pay all the expenses of cultivating the crop.

#### ILLUMINATING ALCOHOL FROM BEETS.

But the beet is commanding attention at this time in France as applicable to another purpose than that for which it has hitherto been principally used, viz, for nourishing cattle and sheep and for making sugar. Mr. Henry Bouchere, French Minister of Commerce, is taking the initiative in a very interesting matter, which may eventually prove to be of considerable benefit to French agriculture. He has conferred with several scientists for the purpose of organizing a competition, on which the sum of \$20,000 will be expended, with a view to ascertaining whether alcohol extracted from potatoes and beet roots cannot be effectively utilized for lighting by incandescence. It is argued that this would be

a very valuable industry, the more so as the supply of petroleum in America appears to be on the decrease, and that at a moment when the German government is encouraging the export of sugar by liberal bounties, it would be well to find another market for the surplus of beets which is annually produced. If the upshot of the consultations between the Minister of Commerce and the scientists prove to be satisfactory, a series of experiments will be inaugurated at once. The sum named will be divided among the investigators who may succeed in solving the problem.

#### USES OF THE BEET IN EUROPE.

It is, of course, impossible, within the limits of a report such as this, to give an elaborate treatise on the method of cultivating the beet, but there are a few salient points which can well be considered, as they may reveal something useful to those interested in the subject.

The beet is extensively cultivated in most European countries as food for cattle, and, in this respect, presents a great agricultural feature; but, at present, we will consider only the facts bearing upon the cultivation of the root for the manufacture of sugar, a principal object being to present the means that have been used in the process of cultivation to augment the proportion of sugar in the beet. Neither physiology nor chemistry has pointed out the means of obtaining this result, and we must, therefore, rely upon the practical experience of the farmer.

M. Achard, who experimented during many years, has stated that beyond the choice of the seed, the result obtained will depend (1) on the nature and exposure of the ground, (2) on the quality and quantity of the fertilizer used, (3) on the preparation of the ground, (4) on the mode of planting, and (5) on the care given to the plantation. The following interesting facts concerning these several propositions have been supplied by an intelligent French farmer largely engaged in beet-culture.



## LANDS ADAPTED TO BEET CULTURE.

Experience in France shows that all land suitable for the growth of wheat may be employed for the cultivation of the beet; nevertheless, it is very necessary to avoid a soil too compact or containing too much clay, which in dry seasons would tend to prevent the development of the beet. A soil composed of sand and clay, though it may not be altogether suitable for wheat, will serve well for the cultivation of the beet. A sandy soil, resting upon a substratum of clay, when well manured, is a very good soil for the beet, but less so than that of sand and clay combined. Sandy ground without cohesion, though it may be highly fertilized, is not suited to the beet, for the reason that water filters through it too rapidly; marshy and turfy lands are equally unsuitable. Land intended for the cultivation of the beet should have a light bed or soil that can be plowed from nine to twelve inches deep, in order that the growing root may easily penetrate it.

Without entering into details, it may be stated that a great agricultural advantage could be derived from the cultivation of the beet by farmers in many sections of the United States, and the manufacture of the product into sugar would soon become a great object of commerce—an industry that would supply advantageously a material to supersede the sugar-cane of the West Indies and the Hawaiian Islands. The beet root can also be profitably manufactured into vinegar and alcohol.

## CULTIVATION OF THE BEET IN FRANCE.

A great deal depends in beet-culture upon the position of the ground. A soil too damp is not suitable for the sugar beet, because in this case the root gains in quantity, but loses in quality; a soil moderately humid and exposed to the midday sun should be preferred. It is necessary, above all, to avoid land which is shaded by trees, and over which the air cannot circulate freely.

In France, the cow-yard manure is greatly preferred over that of the horse, and that of the hog and sheep is

absolutely avoided. The quantity of manure can hardly be determined; it ought to vary according to the natural fertility of the soil. A field well manured will produce relatively more beets, but the quality of sugar will be in an inverse ratio to the excess of manure. Good ground, well-manured, which has been cultivated the first year in wheat and the second year in another kind of cereal, forms the third year an excellent preparation for the beet, without additional manure. Ground less fertile, but well manured and cultivated in wheat the first year, may be planted in beets the second year. But ground of mediocre quality, when intended for the cultivation of the beet, must necessarily be treated with proper fertilizers the same year. Vegetable manure is greatly to be preferred, if used in sufficient quantity, for the reason that an excess of it will not diminish the sugar, as animal and chemical manures are likely to do. Ashes, lime and marl are much used in France. The bad effects of animal manures may be avoided if the land is cultivated in another crop before the beet is planted. Under any circumstances, the land should be manured from six to twelve months preceding the planting of the beet.

If it is found necessary to use manure, the field should be deeply plowed in the autumn and again in the spring when the weather will permit. If the field is to receive plants instead of the seed, it should remain untouched after the two plowings above mentioned until the time of planting, when it is to be plowed into straight, deep furrows and beds thrown up suitable for the beet plant. If the field requires fresh manure, it should be plowed in autumn. The seeds or capsules are to be planted in furrows and covered with a harrow.

The cultivation of the field, which has been prepared as above directed, is to be made in three ways—(1) by sowing the seed, (2) by planting the capsules which contain the seed, and (3) by plants raised in the hothouse. The seed of the beet being inclosed in a capsule of three, four and five divis-



ions, it is very difficult to open the capsule without damaging the seed; it is, therefore, best to plant the capsule itself. In this way, it is true, a superfluous number of plants will spring up, but they can be drawn and transplanted in another bed. When seed are used, the beds should be prepared and the seed planted the middle of April or not later than the end of that month. As above stated, they are to be sown in properly-arranged furrows and covered with a harrow or with the hand to the depth of half an inch or an inch. Five pounds of seed are required for one acre of ground. When the weather is warm and favorable, the ground sufficiently wet, and the seed good and fresh, they will sprout in about eight days; otherwise, they may not germinate for fifteen or twenty days. The increase of the beet is very rapid after the first working. When the plant has about six leaves or more, one goes over the beds and draws out all the plants at a distance of less than eight or nine inches and resets them in spaces of more than fifteen inches where there are no plants. The larger beets have less saccharine material than the smaller; the medium beets are the best.

#### GATHERING AND PRESERVING THE CROP.

The crop should be gathered toward the end of September, for at this time the beet has generally acquired its full growth, and it should not be subjected to the danger of frost, which, though it does not remove the sugar, causes rapid decay. A dry time is most favorable for gathering the crop, and care should be taken not to expose the beet to too much dampness, which causes fermentation and the destruction, more or less, of the sugar principle. When the ground is sufficiently soft, the root may be drawn by stalks and leaves; but if the earth is hard, it will be necessary to use an iron instrument to aid in unearthing the root. After the beet is drawn, it is left on the surface until the laborers have quite completed the day's work, which will give the roots time to dry; then the stalks

and leaves are to be cut off and the beets placed in a secure, dry place. It is important to remove the stalks and leaves before housing the beets, as they cause the root to sprout, which renders the extraction of the sugar more difficult. Moreover, the leaves are valuable as nourishment for cattle. The manufacture of the beet into sugar usually begins in the month of October, though it may be deferred for several months if the beet is kept in a dry, warm place, where there will be no danger of frost. The beet once frozen cannot be conserved and ought not to be used.

#### MANUFACTURE OF BEET SUGAR.

The work of extracting sugar from the beet requires several distinct processes, which may be named in the following order: (1) Cleaning the roots, (2) trituration or cutting into small bits, (3) *prèssure* or diffusion, (4) evaporation. It is unnecessary to note the various methods of washing the beet. This is effected by hand or machinery, as may seem best to thoroughly cleanse the roots of all dirt and grt. Where the old method of extracting the juice is used, the root is first finely trituated and then subjected to pressure. Under the new method, the sugar is extracted by the process known as "diffusion," which is based on the physical phenomena of endosmose and exosmose. The roots, previously cut into small bits, are immersed in water, and the interchange between the water and the sweet juice of the beet begins at once through the intermediary porous partition represented by the cells of the beet substance, which separates the water from the juice contained in the cells. This method has a great advantage over that of pressure, which detaches part of the fibrous texture of the beet and renders the juice more or less impure. Moreover, the pulp from diffusion contains more organic matter than that obtained from pressure, and is much more valuable as food for cattle on account of its greater nutritive properties.



# THE SOUTHERN STATES.

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## THE SOUTHERN STATES.

AN ILLUSTRATED MONTHLY MAGAZINE  
DEVOTED TO THE SOUTH.

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BALTIMORE, DECEMBER, 1896.

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The SOUTHERN STATES is an exponent of the immigration and Real Estate interests and general advancement of the South, and a journal of accurate and comprehensive information about Southern resources and progress.

Its purpose is to set forth accurately and conservatively from month to month the reasons why the South is, for the farmer, the settler, the home seeker, the investor, incomparably the most attractive section of this country.

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### How Cities Are Built.

It is now in order for the cities of the South to resume their efforts to secure immigrants and industries. Depression in business, which for three years or more has served to discourage undertakings and to minimize the results of development effort, seems likely now to be succeeded by a revival of activity, and with the prevalent feeling of confidence there is reason to expect good results to follow persistent and intelligent effort. It is pertinent, therefore, to point out and reiterate the importance of systematic, continual work in behalf of Southern development. Without an exception, the communities which have shown the greatest and broadest advancement within the past fifty years are those whose

people have made the best and most vigorous efforts to attract immigrants and enterprises. This is true of all sections, and just as much so of the South as of the West, the region of most phenomenal development during the past half century. There is no overwhelming geographical reason why Atlanta, Ga., should have become the most important inland city in the South, and the history of the success of that city shows an unbroken record of conspicuous energy and zeal on the part of its citizens. Its men have made the town, and there is here just as intimate a relationship between cause and effect as is seen in the work of the brick mason, by whose efforts, brick laid on brick, the building comes to rear its towering form aloft.

The complaint is made, and not without apparent reason, that the South is not a good advertiser. Loud and furious as was the outcry in many quarters during the "boom days," there has unquestionably been a lack of that patient, methodical, persistent work, in season and out of season, which most tells in any undertaking. In some measure, the same principles are applicable to attempts to secure publicity of any kind, and it is at least worth remembering that the testimony of most very big advertisers is that out of \$100,000 spent in advertising, the direct results secured from the last \$5000 are beyond all proportion greater than those traceable to the preceding \$95,000. The later expenditures and efforts show the cumulative effects of the earlier. Any advertising is better than no advertising, but it is a demonstrated fact that the benefits of a year's advertising are infinitely more than twelve times as great as the benefits of one month's advertising;



and the shrewdest advertiser is he who never stops at all.

While it might have been difficult to find other than dull ears into which to preach the doctrine of persistent advertising—persistent effort—during the past few years, there is certainly every reason now for the leaders in every Southern community to take hold, to arouse themselves and their associates to the necessity of a plan of action, and it should be broad-gauged, far-reaching and prolonged. The South needs to carry on a patient and persistent campaign of education, and in this work every community should be enlisted, and not for a time, but “for the war.”

### **Prices of Southern Lands.**

It is inevitable that the prices of farm lands at present prevailing in the South must before long begin an enhancement in value which will ultimately bring them more nearly to a level with those of farm lands of similar crop-producing capacity in other sections. It is illogical and palpably transitory that lands situated near good markets, on which from two to four crops per year are raised, should be selling at less than \$10 an acre, and yet millions of acres of such lands may be obtained. The ordinary range of prices is from \$2 to \$15 an acre. There are some farms, of course, near large cities and well improved, which it would probably take \$100 an acre to buy, but in every State in the South thousands of acres of exceedingly desirable lands can be bought for considerably less than \$10 per acre.

Numerous causes are responsible for this, chief among which is the change in methods of conducting plantations made necessary by the abolition of the slave system, and as there are more farms than people to properly cultivate them, more lands than purchasers, the law of supply and demand operates to keep prices down.

For the benefit of those who are seeking

to attract immigration to the South, it is doubtless fortunate that these conditions exist, for the exceeding cheapness of the lands is a potent factor in influencing many farmers of the Northwest to come South; but it may be set down as a certainty that a few years will see a marked increase in the ruling prices of Southern farm lands. They are intrinsically worth more, and sooner or later people will find it out.

### **The Dunkards in Alabama.**

Several Southern papers, in commenting on the recent departure of a number of Dunkard farmers from Washington county, Md., to settle in Alabama, have confounded the Dunkard colony at Fruitdale, in Alabama, with the fruit-growing association operation at Fruithurst, in the same State.

Fruitdale is the name of a settlement of Dunkards established in the early part of 1895 as an outcome of a visit made by Messrs. E. E. Posey and F. W. Greene, of the Mobile & Ohio Railroad, to Meyersdale, Pa., while the National Dunkard Conference was in session there. Fruitdale is in Washington county, on the Mobile & Ohio Railroad, fifty-five miles north of Mobile. The Fruitdale Land Co. owns something like 13,000 acres of land, from which it is selling small tracts at low prices and on easy terms. The town, which was started as the colony centre, already has a number of attractive residences, a hotel, stores, a public school and a “Seminary,” conducted by the “Brethren’s School Co.”

Fruithurst is in another part of the State. It was started about two years ago by the Alabama Fruit Growing and Winery Association, an organization formed by the men who had previously been and are still operating with conspicuous success at Tallapoosa, Ga., under the corporation title, Georgia Fruit Growing and Winery Association. The plan of the association is to sell small tracts to be either occupied and cultivated by the purchaser, or planted for



him by the association in grapes and other fruits and small fruits, and maintained for a period of years, the aggregate price of the land and service to be paid in monthly instalments extending over a term of years. The association itself also cultivates land on its own account, and will engage in wine-making. The small grower may either ship his product or sell to the association. An allied company has been formed to operate on the same plan at Anniston, Ala. Fruit-hurst is in Cleburne county, on the Georgia Pacific branch of the Southern Railway, ninety-three miles east of Birmingham. Among those who have settled at Fruit-hurst are a good many Swedes.

The Maryland Dunkards who have gone to Alabama are from Washington county, in the northwestern part of the State, close to the Pennsylvania line. That part of the State known as the Eastern Shore, where the climate is milder and farming conditions are more distinctively southern, is not sending out settlers. On the contrary, it is receiving a large and constantly-growing immigration from other States.

#### **Newspaper Changes.**

Mr. A. A. Allen, who has been for some years editor of the Macon (Ga.) Telegraph, has withdrawn from that connection to take the proffered editorship of the Jacksonville Times-Union. The position the Telegraph has occupied among the dailies of the

South is a sufficient demonstration of Mr. Allen's ability as a newspaper man. The Times-Union will be in good hands.

Mr. Charles R. Pendleton and Mr. G. C. Matthews have become members of the editorial staff of the Telegraph. Mr. Pendleton has made a reputation as editor of the Valdosta (Ga.) Times. Mr. Matthews was for a long time editor of the Memphis Appeal, and of the Appeal-Avalanche. He goes to the Telegraph from the editorial office of the Louisville Courier-Journal, and is one of the ablest newspaper writers in the South.

It is stated that a beet-sugar factory, with a capacity of 300 tons a day, will be established at Rome, N. Y. The interest in sugar-beet culture and beet-sugar manufacture is growing. The industry will have great development in the next five years. The opinions of experts, as published in the last three or four issues of the "Southern States," would seem to establish the fact that a large part of the South is as well suited to sugar-beet culture as any other part of the country, and has advantages over much of the rest of the country.

For the photographs of Memphis views, from which the engravings in this issue were made, we are indebted to the kindness and public spirit of a firm of architects of that city, Messrs. Alsup & Johnson.



# GENERAL NOTES.

## **First Message of the New Governor of Alabama.**

The message sent to the legislature by Hon. Joseph F. Johnston, the recently-inaugurated governor of Alabama, is an admirable document, as a whole, but there are two or three features of it that are particularly noteworthy. On the subject of immigration the governor makes plain his position in the following language:

"I am persuaded that not only would the development of our State be greatly enhanced, but the prompt and steady returns from an efficient bureau of immigration will justify the expense of creating it. When we consider that nearly or quite two-thirds of our agricultural and mineral lands are productive only of taxes, and that our rural population is so widely dispersed as to largely deprive them of school and church privileges, I think no one can question that it is to the interest of the State that we should invite to our borders honest and thrifty citizens who can find here soil and climate and opportunities to make contented homes now becoming so rare in other sections of the Union. No better evidence of the fruitfulness of such work can be found than in the colony planted at Fruithurst, in Cleburne county, where a large body of lands has multiplied more than sixfold in assessed values within about two years, and the influx of industrious citizens continues.

"The day has passed when men or States can wait for the things they want. The gods help those who help themselves. We must take steps not only to proclaim our own resources and stretch out our hands for people and money to build up our State, but the bureau should also be ready to give active and efficient aid to all private effort at development, and generous welcome and watchful care over the people who come. This would, in my judgment, produce more than the cost of the bureau within two

years, establish nuclei over the State that would become the prolific parents of continued development and swell the income of our treasury. We can make a wise beginning without involving a large outlay, gain the assistance of our railroads and lay the foundation for a structure that will bless many localities.

"This officer might be charged also with the duty of procuring and publishing accurate statistics of our productions in mining, manufactures and lumber."

And he is equally unmistakable and emphatic in the following statement of his views on the important subject of public schools:

"Several years since I said in a public speech that the only safeguard for universal suffrage was universal education. The importance of this cause cannot be overestimated. It constitutes the very bed-rock of civilization and progress. It is one thing that disaster cannot destroy nor the sheriff's execution reach. It elevates the citizenship, diminishes crime and multiplies productive enterprise. The State has a vital interest in each citizen, in his morality, his intelligence and his capacities; as the average of intelligence rises, the value of the citizenship increases. We are pledged to develop our public schools to the limit of fair taxation, and this pledge must be rigidly adhered to and faithfully kept with the people who have trusted us. We can better afford to reduce salaries, diminish the number of courts and abolish many offices rather than put the knife into a dollar appropriated for our free schools. The most wasteful profligacy would be the checking of the growth of education."

## **The Yazoo Delta.**

A correspondent of the Chicago Chronicle writes as follows of the Yazoo Delta region in Mississippi:

"Greater fertility is not found in the United States than in that region. The



land, rich as it is, sells at about \$8 an acre upon very easy terms, a fifth cash, the balance in two, three, four and five years, with interest at 6 per cent., payable annually. It is necessary first to clear the land, but this is not as formidable an operation as it might seem, because a relatively small acreage will sustain a man during the time of clearing, and the method is the old-time girdling and burning.

"The country of the Yazoo is on the northern line of the cotton belt and the southern line of the wheat and corn belt. Within its area anything that may be grown in the temperate zone may be produced in abundance, and the yield is not confined to a single crop a year. Cotton is the greatest staple, but all the later comers to the country are discarding the old plantation plan of making one great crop, and are giving their attention to diversity, and also to endeavor to raise live-stock. For the cotton harvest Memphis and New Orleans are the markets, but for all the other product, especially for truck, all the line of fruits and vegetables which may be had in that country very early, and therefore at the highest price, Chicago is the market. The well-managed Illinois Central bears in that country, as elsewhere, a deserved reputation for fair dealing. Easy with debtors and fair in its freight rates, its service, both passenger and freight, is excellent through the entire valley. No one need make an investment unless he himself is thoroughly satisfied with the situation, and as he can never see so well through anyone else's eyes as his own, he ought, if he have leisure and means, look over the land for himself and talk with the people who have had experience in the country. The railroad company makes a favorable rate to land-lookers, and if they purchase will credit the cost of their transportation on their first payment.

"The region is full of promise. Men of energy and industry, with the opportunities that are presented, will work marvels."

#### **Our Gulf Coast as Compared with the Shores of the Mediterranean.**

The Philadelphia Record administers just rebuke to those who seek abroad delights of climate that might be had at home. The Record says:

"One way to diminish the yearly outflow of gold from the United States would be to keep within our own borders more of our pleasure-seeking travelers who go out of the country to spend the winters. Millions upon millions of dollars are yearly spent in finding warm nestling places along the shores of the Mediterranean, where the rigor of our Northern winters may be escaped. Now, if 'climate' of suitable character be the thing which our birds of passage are seeking, they need not go to Europe or Africa to find it. Our own blessed country furnishes every needed variety. The Mediterranean sea lies between latitude 35 and 30 degrees; but the belt of desirable winter habitation in the United States extends from latitude 35 to 26 degrees. In this wide breadth of country is included a diversity of land and water, air and temperature, mountain top and seashore, and such choice of fish, flesh, fruits and flowers as no other part of the world can surpass.

"The advantages of Florida and California have been pretty well advertised. Florida is near in point of easy reach by sea or rail, and California is distant. Both have surpassing advantages which it is not necessary to dilate upon. But how many of the people of the Northern States know that in the Gulf of Mexico we have our own Mediterranean, and in the country lying along its shores our own Rivas, comparable in all that makes for health, comfort and the pleasure of living with the favored resorts of Europe?

"New Orleans in the winter season is not only a very healthy but a very attractive city. It is a convenient centre, easily reached, and is within short distance of hundreds of lovely wintering places, and not among uncultured people or half savages, as some uninformed Northerners may think. The fringe of fine country on the sloping shores of the Gulf, from Florida to Texas, is not by any means a new acquisition. It has been settled for 200 years, and has been a joy and a delight to an appreciative population. Sheltered by the highlands and mountain ranges to the northward, the warm waters of the Gulf so modify the winter rigors that they are scarcely felt.

"New Orleans, Mobile, Tampa, Biloxi, Pass Christian, Ocean Springs and other



Southern resorts are places which health-seeking invalids and pleasure-seeking tourists who have money to spend and time on their hands should pay the tribute of a visit. Those who go will linger, and will go again and again.

"Why should a stormy and uncomfortable flight across the Atlantic be made year after year in pursuit of delights lying in wait for us at our very feet? Why go to Europe for any good thing which we may more easily and cheaply get at home?"

### **Birmingham's Carnival.**

Birmingham, Ala., is making arrangements for a second annual series of carnival festivities to be held next March. The Birmingham Carnival Society announces the following programme:

"On Monday night Rex Vulcan II will be received in a befitting style by the society, city officials and distinguished citizens. Rex will lead the first night's parade (Monday evening, March 1, 1897). This parade will consist of the king's royal chariot and eighteen floats built exclusively by the society.

"On Tuesday morning the trades' display, comprising Rex in his chariot of state, citizen military, city officials, officers of the society and members in carriages and floats, will hold forth.

"Tuesday night the second parade, comprising eighteen floats built exclusively by the society, will hold forth. This parade is intended to equal, if not exceed, anything ever undertaken by Mobile or New Orleans. After the parade the grand Rex ball will take place."

### **Lettuce and Cabbage in Florida.**

A correspondent of the Florida Citizen, writing from Gainesville, says:

"Great activity is noted among the truck farmers of the Gainesville district, who are either planting or cultivating vegetable crops. Every indication points to a much larger acreage this year in lettuce and cabbage, particularly the latter, which is being planted extensively by those who have never raised it before, and almost every farmer who has cultivated lettuce in the past is increasing his acreage.

"Lettuce-growing is fast becoming the leading industry in this State. Only a few

years ago nobody shipped this product North, and only a few truckers raised it at all. Two years ago only a few baskets of lettuce went from Florida to the North, and what little went forward was shipped by farmers in this immediate vicinity. Last year the acreage was largely increased, with an excellent yield. With better shipments came better prices in both New York and Philadelphia, which handled almost all of the Florida lettuce.

"The shipments of lettuce from the Gainesville district last year aggregated about 74,699 packages from an acreage of about 825 acres. During the time that shipments were being made the markets in New York and Philadelphia were at no time glutted, and lettuce brought about \$2.50 per package on an average, after the express charges and the cost of baskets had been paid. Many made fortunes with the crop, and encouraged by the results last year, the farmers will all plant more or less of it this year.

"The farther south one travels the greater he finds the increase in acreage. In Tacoma, a small neighborhood on the Gainesville & Gulf Railroad, and the Florida Southern division of the Plant System, farmers are planting 50 per cent. more lettuce than they have planted in any previous year. Just north of this the farmers of Miccanopy are going into the lettuce culture on an extensive scale, and will plant double what was cultivated last year. Still further in the Lake Simonton, Evinston and McIntosh neighborhoods, all of which are included in the Gainesville district, five times more lettuce will be planted this year than last, when the acreage was small.

"From present indications lettuce will begin to go forward as early as the 25th inst. The crop is usually shipped as late as April 15, and is a steady source of revenue for five months. Last year it brought to Florida about \$200,000. That sum should be doubled during the coming winter. Last year the \$200,000 was distributed among the farmers in the Gainesville district proper. This year many other points in the State will receive a share of the returns.

"Last year it was estimated that 425,040 barrel crates of cabbage went forward from the Gainesville district. This year, if the conditions shall be favorable from now on,



at least 650,000 barrels of cabbage should be sent out. Farmers made about \$712,000 last year from this crop, but the market that season, owing to a short crop in other localities, was unusually good. The price was \$1.50 net last year, but truckers do not anticipate more than \$1 net this year. The first shipment of cabbage will be made about February 10, when all of the Northern stock will probably have been disposed of. Besides cabbage and lettuce, many thousands of packages of other classes of truck will be shipped from here. The farmers are planting every variety of winter vegetables. Beets are planted in good-sized patches, and are looking well. Shipments will be begun soon. The crops of English peas, which have been extensively planted, are looking well. A number of packages of English peas have already been shipped, as well as several hundred packages of string beans."

#### **Scandinavian Colony for Tennessee.**

Messrs. Caldwell & Dulaney, Bristol, Tenn., write to the "Southern States" as follows about the Swedish colony to be settled near Bristol, as reported in the November number of the "Southern States":

"The arrangement is to bring from thirty to forty families from the Northwest who are sufficiently Americanized to speak our language and understand how to till our soil to the best advantage, and after settling these families or a part of them on the land, to then bring about 150 or 175 families from Norway, Sweden and Finland and settle them on the same territory. The boundary of land to be occupied embraces between 5000 and 6000 acres. It lies within about two miles of Bristol, and is owned by the writers. The settlers propose to engage in truck farming, chicken raising, bee culture, fruit growing, grape culture for table and wine, etc. We have been greatly aided in our work by Mr. M. V. Richards, land and industrial agent of the Southern Railway."

#### **Activity and Prosperity in Florida.**

Dr. L. R. Warren, of Braidenton, Fla., says that half the entire orange crop of Florida this year will come from Manatee county.

"The county will produce," he said, "fully

65 per cent. of the usual crop. The total number of boxes estimated to be shipped from the State this season will be about 200,000, and of this it is expected that Manatee county will furnish 100,000 boxes. These are held at \$3 per box on the trees, and some of the crop has already been sold upon that basis. The growers of that vicinity were able to obtain that for their crop last season."

In speaking of the vegetable crop of his section, Dr. Warren said that there was as much as 500 acres in celery alone in his county. He did not know just the acreage of vegetables in his vicinity, but to give an idea he said that from one wharf alone at Palmetto last season 1000 crates of vegetables were shipped daily, and he said that the shipments would be heavier this season.

Not a single empty house can be found in Braidenton, nor is there one in the neighborhood. As many as fifty families are living in tents while they are waiting for houses to be constructed for them. During the past two years there has been a great influx of people into that county, and there never was a time when it had better prospects.

#### **The Rice Fields of Louisiana.**

The towns of Southwest Louisiana lying west of the sugar district have drawn their sustenance almost wholly from the rice farms lying about them. Fortunately, the thrifty farmers from the far North and West, whose industry has converted many miles of Louisiana prairie into shining waves of golden grain, planted, besides rice, large orchards of fruit and meadows of hay and other Louisiana products. Last year prices for rice were lower than the year previous, and those had fallen down to the cost of production, and in many sections lower. Notwithstanding this, the crop just harvested would have brought in an even larger yield than that of past seasons, save that the awful drought of the past summer swept the prairies like a breath of flame, shriveling into brown, seared wastes a country that in the spring shone like a vast green emerald in the sun. Along the waterways and irrigating canals magnificent fields of rice swayed, golden green in the summer breezes, while but a few fields distant lay the dead stalks of a dead hope, and



even the home garden in the midst was almost barren of verdure.

The crop that was harvested, though very short, has brought prices that made farmers remember the good old times when a good rice crop was a veritable mine of wealth.

The town of Crowley lies in the centre of the largest rice-producing section of the State, and realizing that Providence cannot always protect the rice-grower at the expense of his neighbor's cotton crop, the Crowley people followed somewhat the advice of that great commander in revolutionary times, who cried: "Trust in the Lord and keep your powder dry!" They trusted in Providence for a good crop and dug an irrigating canal six miles and one-half in length to keep their rice fields wet.

Another firm, Abbott Bros., of the same parish, ran a canal, reputed to be ten miles in length, around their rice farms. The cost of keeping water in these canals is but slight. One engine supplies the entire length of the Crowley canal, the water in which ranges from three to six feet in depth, and has the appearance of a bayou of considerable width and beauty.

One farmer on this canal planted rice at an outlay of \$10 for twelve acres; the twelve acres produced 296 barrels, which sold in Crowley at \$3.50 a barrel. Other farms along this irrigating canal had the same story to tell.

A vast source of income to the rice planters in this region are the rice mills—large, splendidly equipped and successfully operated—which have sprung up in less than three years' time. Indeed, mills owned and operated by the planters themselves are of this season's growth. There is no freight paid by farmers to carry their rice to these mills, no middlemen's charges, and the money paid for milling goes into the farmers' own pockets, or they sell their crop at a fine price on the spot to the mills.

Sad as the contrast is in the rice parishes of the State between the heat-consumed fields and those green from irrigation, two valuable lessons have been learned from the result of the terrible drought—one, that irrigation is the only safe and proper course for a rice planter to pursue; the other, that under the most untoward circumstances a farmer in Louisiana can be self-sustaining.

Landlords say that though bad prices and hard times have prevailed for the past two years, and the crops were a total loss to the producer this season, small farmers owe them comparatively little for the rental of their farms and advances necessary to carry them on, as they are almost entirely self-sustaining. By the introduction of a couple of "ifs" it can be seen that he may be entirely so. For instance, if he supplied himself with receptacles for water sufficient to water his stock and garden during a drought, and if he raised one or two commodities, easily grown, for the purpose of seed in case he has not money to buy seed for future small crops. These small farmers rarely attempt to cultivate large tracts of land, and their outlay is comparatively small. They would willingly pay rental for the use of an irrigating canal in any section of unwatered country if some company would build the canal. Two canals in the prairie district have proved profitable investments.

A comparison of the price received this year for the rice crop of Louisiana, and that received last year, when every section yielded its increase, shows a gain of this year over last, the small production this year netting per acre more than four times the price paid last year per acre.

The good price is not due to the shortness of the Louisiana crop at all, but to the condition of the rice market, which is governed by causes more or less extraneous to Louisiana.—New Orleans Picayune.

### **Growth in Mobile's Export Business.**

The Mobile (Ala.) correspondent of the New Orleans Picayune writes in that paper of November 10:

"The export business out of Mobile seems to be on such a boom as has never before been known in the history of this port. When the Horsley Line from Mobile to Liverpool was inaugurated two years ago the agent here had to hustle to load his steamships as they came into port, but now the freight comes to him. This line has already cleared this season five steamships, all of which, with the single exception of one to Manchester, went to Liverpool. There are three steamships of this line, the Selma, Daventry and Bencliff, due the latter part of this month, on the 22d, 25th and



28th, respectively, and there is not a foot of room in either of them for any freight, as the cargoes for them have already been engaged, and there will be no room in any of the steamships of this line until December."

#### **A Harbor Defense Convention to Meet at Tampa.**

The governor of Florida has addressed the following letter to the governors of the other States:

"In view of the dangers which threaten the Gulf and South Atlantic seaports of the United States, we have deemed it proper to issue a call for a convention in the interest of the Gulf and South Atlantic harbors and their defence. The object of this convention, which will assemble at Tampa on the 20th day of January, 1897, is to discuss methods for the proper defence of Southern harbors. As loyal citizens of the republic it behooves us to heed the admonitions of wisdom and endeavor to speedily place our defenceless Southern ports in condition to protect us from the possible peril of foreign invasion. In the interest, therefore, of this important subject, we respectfully request your excellency to honor this convention with your presence and also to appoint delegates to your Commonwealth to attend the same."

#### **A New Farm Colony Enterprise in Virginia.**

Mr. D. L. Risley, a real estate operator of Philadelphia, has been very successful in settling farm colonies in New Jersey. His plan is to cut up a large area of land into 5, 10 and 20-acre tracts for truck farmers, and sell them on small monthly payments. He has planned now to try the same sort of operation in the South. In connection with the Atlantic & Danville Railroad, he has taken hold of a tract of 20,000 acres in Southside, Va., and will undertake to settle it up with small farmers from the North. He will take down excursion parties of home-seekers every two weeks by the Old Dominion Steamship Line.

#### **Growing Importance of Southern Ports.**

The merchants of Boston, Mass., are flying a signal of distress over the diversion of freight and passenger traffic from the Atlantic seaboard to Gulf of Mexico ports.

As President Jones, of the Massachusetts State Board of Trade, remarked in his recent address, they see Boston's position in second place as a port of export endangered by the rising star of New Orleans. The extensive terminal improvements that the Illinois Central Railroad has just completed at New Orleans are likely to have an important bearing on the future of the exporting business at every port on the Atlantic seaboard, and especially Boston, which does not enjoy the benefits of a differential on Western grain. Already thousands of tons of packing-house products, designed for export, are shipped from Chicago, St. Louis, Kansas City and other points in the West and Southwest, to New Orleans and Galveston, and thence to Liverpool, London and many of the continental ports. Heretofore a larger proportion of this merchandise found its way to New York and Boston, but now that this natural outlet for the whole of the Mississippi valley and other sections of the West has been opened, the two cities named are likely to show a great falling off in the volume of their export business.

The Missouri Pacific is doing a very large business over its own rails via St. Louis to the Gulf from the West, and its New Orleans gateway over the Texas & Pacific from the Southwest is an important factor in the situation. The Pittsburg & Gulf will soon be completed to Port Arthur, and will become an important factor in the struggle for business between Atlantic seaboard and Gulf of Mexico lines.—Kansas City Star.

#### **The South's Future "Unobstructed by a Single Adverse Factor."**

The South today is the favored section of the United States. During the past three years' depression it has suffered less than the West or North, and it has been the first to show the returning tide of prosperity. The clearings of its cities have as a matter of fact been larger, the development of new industries has been only slightly interfered with, and its cities have exhibited a remarkably strong growth, even in the face of adverse circumstances.

The South cannot avoid fulfilling its manifest destiny among the sisterhood of States. It has in abundance all the natural resources which have made Pennsylvania and other



manufacturing States the workshops of the nation, it has a climate superior to any of them, its agricultural possibilities are not to be enumerated in the space of one short article, its waterways as channels of commerce are not to be surpassed, and its magnificent harbors are drawing to the South Atlantic seaboard and the Gulf increasing fleets of vessels which carry its products direct to all foreign ports.

The railway facilities of the South will be vastly improved during the next several years; in fact, they will have to be, in order to keep pace with the march of improvement. The trend of manufactures toward the South is only an evidence of this fact.

Summing up the whole question conservatively, it must be admitted that the South today stands on the threshold of a future unobstructed by a single adverse factor. The new South is an actuality. That it is equal to all that will be required and expected of it no one will seriously deny.—*New York Financier.*

### Tennessee Immigration.

Col. J. B. Killebrew, who is in charge of immigration for the Nashville, Chattanooga & St. Louis Railway, has received reports from nearly all the stations on the line of the road during the past week, and during the two years he has held his position not less than 1160 farmers, or about 5500 persons, have settled on this railroad. This does not include those who have settled in the cities of Nashville, Memphis or Chattanooga, nor those who have settled on the Western & Atlantic Railroad.

Colonel Killebrew says he thinks the business will be exceedingly brisk from this time forward, for the reason that a revival of business will enable thousands of farmers in the North to sell their farms. These farmers are heartily tired of the severe winters which takes all the profits of the farm to tide them over. He thinks that during the Centennial Exposition thousands will come and make Tennessee their permanent home. Those that have come are delighted with the climate, soils, productions and markets of Tennessee.

The Indiana Fruit Co., of Muncie, Ind., is putting out a peach orchard of 100 acres in Worth county, Georgia, near Sylvester.

### What it Costs to Raise Corn in Iowa.

Mr. Ole Olson, a farmer at Cedar Lake, Iowa, in a letter to the *Houston (Texas) Post*, gives the following as the result of his "thirty years' experience of what it costs to raise one acre of corn in this biggest corn-producing State" (Iowa):

Land valued at \$50 per acre, 6 per cent. interest.....	\$3 00
Land tax and road tax.....	26
Three loads of manure, 50 cents per load .....	1 50
Pulverizing, four horses, twelve acres per day.....	33
Harrowing before planting, four horses, twenty acres per day.....	20
Planting, two horses, checkrows, twelve acres per day.....	23
Seed corn, one-eighth bushel, \$1 bushel .....	12
Harrowing after planting, four horses, twenty acres per day.....	20
First cultivating, two horses, six acres per day.....	45
Second cultivating, two horses, eight acres per day.....	32
Third cultivating, two horses, ten acres per day.....	27
Hoeing and weeding.....	15
Husking, two horses and wagon, fifty bushels per day.....	2 48
Cribbroom, three cents per bushel....	1 35
Hauling to market, one load, forty-five bushels, half-day's work.....	1 38
Total .....	\$13 32
The stock may be worked for feed after corn is out, deduct.....	27

Total cost for one acre of corn..\$13 05

He puts his average crop per acre from year to year at forty-five bushels. Many farmers, he says, claim to raise more than this, but he thinks this is as high an average as anybody can count on. At forty-five bushels per acre, the cost, on a basis of \$13.05 per acre, would be twenty-nine cents a bushel.

The population of Fitzgerald, Ga., is having large accessions every day. Nearly every eastbound train on the Georgia & Alabama Railroad carries a number of new settlers from the Northwest. On one day



in the early part of November a single train had as many as 200.

### **Immigration Effort in the Northwest.**

The Northwestern States are working with renewed energy for foreign immigration. A dispatch from Tacoma, Wash., says:

"The German consul at this port will leave today for Germany, where he will spend six months in touring on the resources and industrial probabilities of the Pacific Northwest, with a view of attracting immigration and the investment of German capital in mining and other enterprises. The Chamber of Commerce has assisted him in the collecting of a first-class exhibit of native products, including several barrels of Yakima apples, which are to be presented to Emperor William and Prince Bismarck. The products will be exhibited at Berlin and Hamburg, and then placed in the permanent commercial museum at Bremen."

### **Fruit-Growing and Gardening on a Town Lot.**

A correspondent of the *Indiana Farmer*, who lives on a lot 66x132 feet, gives the following account of fruit he raised on such of the lot as is not given up to buildings and lawn:

"I bought about \$15 worth of fruit trees and berry bushes. This year we have canned forty-two quarts of cherries, nearly all of which were seeded. Two Early Richmond trees produced five quarts, and three old English Morello trees produced thirty-seven quarts.

"We canned five quarts of currants from five bushels, six quarts of gooseberries from seven bushels, thirteen quarts of raspberries, six quarts of Snyder blackberries, three quarts of crab apples and three quarts of plums. I think there are about three-fourths of a bushel of Lombard plums on the tree yet.

"We had fruit to use on the table during its season; and we made some jelly and preserves and plum butter. We have three apple trees, viz, Yellow Transparent, Duchess of Oldenburg and Wealthy, which furnished us cooking apples for several weeks. They are all very good apples. And the trees were damaged considerably

this year by blight. It also damaged our pear and crab-apple trees. Can any of the readers of this article give a remedy for the blight?

"We had a few Clapp's Favorite pears. Will have about one-half bushel of Duchess d'Angouleme, and the same amount of Keiffer's Hybrid. The last variety is praised very highly by a great many people, but I would not set another one out if it were given to me. The pear looks nice, and that is all the good I can say of it. The first two named above are very good pears to look at or to eat. We have plenty of Concord grapes for our own use. Our currants are Fay's Prolific and white grapes.

"We had a few cherries from Governor Wood, Black Tartarian and May Duke trees. I would not advise anyone to buy those kind of cherry trees for our latitude. We had one Russian apricot to get ripe. There were quite a number on the tree, but they all fell off but one. I did not do any spraying. Perhaps I might have saved some fruit if I had. Our lot is 66x132 feet. About two-thirds of it is set out in fruit; the other third is occupied by buildings and lawns. We raise considerable garden truck on the lot also."

### **Hog Raising in Texas.**

A correspondent of the *Galveston News*, writing from Colmesneil, says:

"About three years ago, soon after the removal of duties on lumber, W. T. Carter & Bro., large mill-owners at Marnum, eighteen miles west of here, decided to do a little experimental farming. Accordingly they had cleared, fenced and cultivated about 200 acres of land, from which their mills had used all the merchantable timber. They fertilized the soil and grew on it a diversity of crops—corn, rye, oats, barley, potatoes, peanuts, melons, pumpkins, squashes, etc. Two years since they stocked the place with hogs of varied grade, ranging from the razor-back to Berkshires and Red Jerseys. This season they will market 40,000 pounds of choice pork. Chief among the most prolific and valuable articles of hog diet grown on the farm was the squash. Four acres were planted early last year, turning out a most fabulous yield from May till October, two plantings being necessary, however, as the vines, after yielding about three



months, die or rot off at the root. This year about three acres of choice, highly-enriched land was planted in squashes. They began yielding in May, and daily for three months an average of three drayloads, or sixty bushels, of large, white, soft squashes were taken from the patch and fed to the hogs raw. The common bunch squash was given a trial also, and proved a very satisfactory yielder, but the other quality declared its superiority both in size and softness over the 'bunch.' As a food for hogs in summer Mr. Carter thinks there is nothing more healthful and nutritious than the squash, and he expects to grow a vast quantity of that product the coming season. He attended the State fair at Dallas recently and added to his hoggerly several of the premium takers, among them splendid specimens of the Berkshire and Poland China breeds. He has found hog-raising a profitable industry thus far, and expects to make it one of the largest 'side-shows' to his milling business."

### **The Plant System's New Steamship.**

The splendid new steamship of the Plant System, *La Grande Duchesse*, is now running regularly between New York and Savannah. *La Grande Duchesse*, built at a Southern ship-yard, Newport News, is said to be one of the finest steamships afloat. She is built entirely of steel.

On the main deck forward is the dining saloon, with a seating capacity for 125 people. This room is handsomely fitted up and decorated in white and gold. Forward of the dining-room is a reception room for second-class passengers, forward of which are sleeping accommodations for these passengers. In the after end of the dining saloon is a grand stairway leading to the social hall above.

On the main deck aft of the dining saloon is a pantry, and aft of this a large galley. On this deck are located cold-storage for provisions, officers' messroom, baker shop, telephone exchange room, stewardess' room and a number of staterooms abreast of the boiler and engine, hatches for oilers, water tenders, etc. Aft of the machinery is the main saloon, with two tiers of staterooms on each side. In the forward end of this saloon is a grand stairway leading to the social hall above. Immediately aft of the

main saloon are toilet, bathrooms, etc., for ladies and gentlemen.

In the forward end of the upper or promenade deck is a social hall for second-class passengers, aft of which is a social hall for first-class passengers, with a stairway leading to the dining-room. This social hall has a number of staterooms for first-class passengers.

On the pilot-house deck forward is the pilot-house, aft of which are the captain's room and two tiers of staterooms continuing to the smokestack. Over the social hall, aft, is a large steelhouse fitted up as a ladies' observatory. All of the social halls are finished in mahogany, as well as the ladies' observatory. The second-class social hall and reception room are finished in quartered oak.

The vessel is equipped with twelve life-boats, six life-rafts and the necessary life-preservers, etc., and, in fact, everything necessary for the safety of passengers and crew. A complete ventilating system is connected with every compartment and stateroom in the vessel. The vessel is also fitted with a complete fire-alarm system and lighted by electricity.

Unusual precaution has been used in every part of the construction for the safety and comfort of the passengers. The vessel has accommodations for about 300 first-class and 400 second-class passengers.

Tomatoes are now being planted in South Florida.

### **Tobacco in Southwest Georgia.**

Major T. B. Brooks, of Newburg, N. Y., writes to the "Southern States" as follows:

"The 'Southern States' is doing an important work, and is vastly more reliable than most papers and journals in talking about the South. The South is good enough to tell the exact truth about it, and this is the best policy in the end.

"I do not know that you are aware that Southwestern Georgia and the adjoining parts of Florida has again become a great cigar tobacco producing region. Three consecutive crops of Sumatra wrappers have been grown, and the best Cuba filler raised in the Southern States is grown there. The old Florida leaf (speckled or turkey-egg) tobacco was extensively grown



there before the war. I have spent twelve winters in Southwestern Georgia, and I believe in that country thoroughly."

Major Brooks is one of a number of wealthy Northern gentlemen who own the famous Roseland plantation, near Bainbridge, Ga., containing 5500 acres well stocked with Devonshire, Holstein and Jersey cattle, Essex hogs and other blooded stock. The owners have built cottages, in which, with their families, they spend the winters. The game of the plantation has been preserved for several years, and an abundance of quail, wild turkey and small game furnishes ample recreation. The place is about thirty-five miles from Tallahassee, Fla.

In regard to the tobacco interests of that section, the following statements on the subject were published in the September number of the "Southern States" in an article on "The Hill Country of Florida." The characteristics of Thomas and Decatur counties, across the State line in Georgia, are identical with those of Leon and Gadsden counties, in Florida:

"The raising of tobacco in this section has been given an impetus by the successful results following the large operations of Straiton & Storms, of New York, and it seems likely that this industry is destined to become one of so great importance as to attract national attention. After many experiments, Messrs. Straiton & Storms were convinced that no better leaf is possible anywhere in America than can be raised in Leon and Gadsden counties, Florida, and the claim is even made that the quality will be found equal to the best Havana. The extent of their confidence in the situation is shown by their purchase of about 20,000 acres of lands in these two counties, and the equipment of their farms consists not only in the construction of large numbers of curing barns, employes' dwellings, etc., but they have brought in a herd of 500 head of fine cattle, four carloads of Kentucky mules and arranged every other detail necessary to supply the wants of their army of employes. They have built a large cigar factory at Quincy, in Gadsden county, the plant covering about six acres, employing about 1000 hands and turning out at present about 1,000,000 cigars a month. And

the capacity is still inadequate, and will be increased.

"These operations and the superior quality of the Sumatra leaf now raised in Leon and Gadsden counties have attracted the attention of manufacturers all over the country, and will be followed by other similar investments, in all probability, so that the tobacco industry bids fair to become an item of prime importance in the development and prosperity of the section. The El Provedo cigar factory has already been established at Tallahassee, and for the past two seasons representatives of half a dozen large factories have appeared on the field to bid for the Sumatra crop of Leon and Gadsden counties before the tobacco was taken down from the curing shed.

"The growing of plug leaf has also shown highly satisfactory results, Mr. G. W. Saxon, president of the Leon County Leaf Tobacco Co., reporting that he has raised on twenty acres 20,000 pounds of as good tobacco as is raised in Virginia or North Carolina, and for which he gets an average of twenty-six cents a pound."

### **One Hundred Experimental Farms to Be Established by the Seaboard Air Line.**

The Seaboard Air Line, in pursuance of its policy of development, has added another to its many existing methods for promoting the development and welfare of its territory. It has established an industrial department, the purpose of which will be not simply to promote manufacturing and general development along its line, but to look after the interests and well-being in general of manufacturers, merchants, farmers and others who live in its territory. Under the broad and progressive management of Mr. St. John, the Seaboard Air Line has already done a vast work in improving the conditions along its line. More than fifty small canning and evaporating plants have been established on farms and in villages. Much attention has been given to the introduction of new crops. The adaptability of the South, or in particular this part of the South, to hop culture has been investigated at much expense, and a great deal of initial and experimental work has been done. Under the auspices of the road, Mr. A. L. Jones, formerly editor of the Hop Growers' Journal, of New



York, and an expert in all matters relating to the growing of hops, has been engaged for nearly a year in studying and investigating the facilities of the country along the Seaboard Air Line for hop-growing, and in delivering lectures on the subject to farmers and in other ways working up interest in this crop. Experiments that have been made have been entirely successful, both as to the yield and quality of the product, and a large hop-growing industry will undoubtedly be developed. A good deal of attention has been given also to Kaffir-corn. This and seed of other crops not now produced have been liberally distributed among farmers.

The most recent and most noteworthy undertaking in this direction on the part of the road is the formulation of a plan for the establishment along the line, under the direction of the industrial department, of 100 agricultural experiment stations. At these stations will be planted all suitable varieties of fruit trees, shrubs, vines, vegetables, etc., the purpose being to ascertain and demonstrate what crops can be best and most profitably produced. An order has already been given to the J. Van Lindley Nursery Co., Pomona, N. C., for 23,000 trees and vines to be put out at these experiment stations. The fact that this order has been given to a Southern nursery is significant, as showing the road's purpose to patronize home industries. These experimental farms will make tests with such things as have not heretofore been grown on a large scale—broom corn, celery, sugar beets, etc. An effort will be made to promote the establishment of factories for utilizing such raw material as these farms may show the country is capable of producing. There would seem to be, for example, no reason why brooms should not be made of material grown in this locality, instead of being brought from the West. Mr. St. John's idea is to make the territory tributary to his road produce, in both agricultural and manufactured articles, everything it is capable of producing.

This industrial department will go even further than this. It will be a part of its business to aid farmers in marketing their products. It will keep a close watch on markets, so that shipments may be made to the best advantage, the best prices realized,

and it will undertake also to promote an improvement in the breeds of stock.

This industrial department will be under the management of Mr. John T. Patrick, of Pine Bluff, N. C. Mr. Patrick was for ten years chief of the immigration department of North Carolina, and was the originator of Southern Pines, which has had such large development as a fruit-growing locality and as a health resort. The selection of Mr. Patrick as manager is in line with Mr. St. John's policy of availing himself of home talent. It was charged a short time after he assumed management of the Southern Railway that he was discharging old employes and bringing men from the West to take their places. As a matter of fact, out of 2000 or more officers and employes, it is said that there are not more than a dozen new men on the entire line, and these are men who had been previously associated with Mr. St. John, and whose abilities in immigration and development work the South has been very fortunate indeed to be able to secure.

Under Mr. Patrick's management the industrial department will be an effective instrumentality in promoting the settlement and development of the Seaboard's territory.

### **Rye a Profitable Crop.**

In Europe rye is regarded as one of the most important crops grown, but in this country it is largely displaced by wheat; yet rye will grow where wheat will not thrive, and there is no kind of soil, from sand to clay, that will not produce a full or partial crop if seeded to rye. It is hardy, standing the severest of weathers, and can be depended upon when other crops have met with drawbacks. It is grown largely for its straw, but it has long served as late and early pasturage for cattle, furnishing green food late in the fall, after grass has ceased, and coming up sufficiently early in the spring to afford green food while grass is too short. Rye also grows at a season of the year when the land could not be made to produce anything, and serves as a covering to the soil. It rivals crimson clover as an early starting plant, and can be plowed under early in the spring in time for potatoes, but it possesses sufficient value as a crop to be harvested. On sandy soil, where



wheat has never been grown, good crops of rye have been secured, being indispensable in some sections, not only for its grain, but also for its straw, which commands a higher price in market than that from wheat.

It is seldom that any crop is grown for its straw, but rye is an exception in that respect. An ordinary crop of rye should give a ton of straw and from twelve to twenty bushels of grain, according to the soil upon which it has been grown. The grain will more than pay for the labor of plowing, harvesting and threshing, leaving the straw to be sold, and it will bring fully as much in the markets of the large cities as hay, being preferred by liverymen and those owning private stables, as the straw is usually unbroken and in bundles. The objection to rye is that it has heretofore been threshed by hand, in order to avoid breaking the straw, but there are now threshers which remove the grain without damaging the straw. Considering that rye is seeded in the fall, and can be gotten out of the way for another crop the same year it is harvested, the straw is almost clear profit.

Those who have tested the selling of rye straw with using it on the farm claim that it is the one crop that can profitably be sold off the farm instead of attempting to get more from it through the agency of stock. The actual manurial value of rye straw, if added to the manure heap, is estimated at about \$2 per ton, while the price of rye straw, banded, has reached the sum of \$18 to \$22 per ton. Wheat straw, on the contrary, is worth only one-third as much, and at times possesses little or no value in market, but rye straw is always in demand. As the straw carries away but a small proportion of the fertility of the soil compared with its selling price, it is more profitable to market it and buy fertilizers, the farmer thus being not only enabled to restore that removed from the soil by the crop of rye, but also is provided with fertilizer for the succeeding crop. With rye and crimson clover the farmer can add to his pasturage and enrich his soil instead of impoverishing it. A fair trial of rye as a crop, where there is a convenient market for the straw, will demonstrate that it is far above the average as a paying crop when all of its other advantages are also considered. Those who seeded rye this fall will save loss of plant-

food by the covering afforded as well as utilize land that would otherwise be left in stubble or weeds.—Lynchburg (Va.) News.

### Keeping Sheep in the South.

Few Southern farmers realize the immense advantages they possess in their climate. This is such as to enable them to produce the most valuable of crops of the North and those that are specially adapted to the South. And as to live-stock, they enjoy far greater facilities for making profit than Northern farmers ever can. A year-round mildness of climate makes outdoor feeding possible the whole year. The greater list of feeding crops that may be grown so cheaply enables the sheep to be fed for, at the most, not more than twenty-five cents a year, counting in this the whole cost of producing the feed and an adequate profit besides. This includes some hand-feeding, which in many cases and localities is unnecessary. The Southern farmer grows too much cotton. The overplus every year keeps the price down to barely the cost of the product, and it seems impossible for any kind of general effort to avoid this to succeed. But if the Southern farmers would keep sheep and grow pasture for them on their surplus land, using their timber lands as a summer range, and raise such feeding crops as sweet potatoes, which may be grown for five cents a bushel, crimson clover or winter oats, or rye, for winter feeding, they might be able to put the lambs into the Northern markets for one-fourth the money needed to pay the shepherd in the North. Of course, the price obtained would pay a big profit on the business if the right way were taken.

I would recommend, says a Southern farmer in American Sheep Breeder, the Merino ewes for the flock and a Southdown or a Shropshire ram for the sire. There is no fatter or plumper market lamb than this cross, and the black faces will make them most acceptable to the butchers. It is quite possible to get these lambs into the Northern markets in the season, either alive or dressed, without any difficulty on the fast trains on any of the railroads. Millions of acres of cheap land are readily available, pure water from the abundant streams flows everywhere, the mildness of the climate is just what is wanted for the perfect



health of the flock, and nothing stands in the way but the apathy of those concerned. One-fourth less cotton would then be grown, bringing the price to an immediate profitable point. The wool finds a home market, for the facilities for manufacturing are nowhere better over the whole face of this broad continent. Money now sent abroad would be kept at home, and more would be brought in, making the whole South rich in a few years.—Savannah (Ga.) News.

### Artichokes.

The following is from the Charleston News and Courier:

"The wonderful productiveness and ease with which the improved artichokes can be produced is always a surprise to those who cultivate them for the first time. They are an excellent food for cattle, horses, sheep or swine, and the cheapest and healthiest hog food raised, one acre being equal to five acres of corn for building up large, healthy frames with plenty of bone and muscle.

"They not only grow rapidly, but fatten at the same time, only requiring a few bushels of corn to harden the flesh in the finishing process. The hogs will harvest them themselves, thus saving all expense, even that of feeding. Freezing and thawing does not injure the feeding or fattening qualities, and the hogs will feed themselves from October until May, except when the ground is frozen solid.

"Any good corn land will produce immense quantities, from 300 to 800 bushels per acre. I find that low, mucky land that is too frosty for other crops, is just the soil for the artichoke. I have also fed to my milk cows, finding that they beat any root grown for increasing the flow of milk. They were also tested in the Fremont Creamery last winter with very good results. There is no doubt but that the improved artichoke is going to be the leading farm crop, for no insect, blight or rust has yet struck them, and the tops make a fodder, when properly handled, equal to corn. One thing that is keeping the improved variety from coming to the front is so many farmers think if once planted they can never be eradicated. This is not true, for I have destroyed them several times. I simply let

them get up about one foot high and plow under. This will destroy them, but the simplest way is to let your hogs stay in a little late in the spring; they will take the last one in the ground.

"One thing I must speak about before I close is keeping them through winter, which I consider a very important part. It is almost impossible to keep them over without decaying unless you know how. I kept last winter 700 bushels in pits. I simply scooped out a hole not over ten inches deep, and then I piled my artichokes up to a peak above the ground. I then put a thin layer of straw on top to keep the dirt from rolling through, and then I put on dirt not to exceed five inches deep, and packing it down so the water will run off. If covered deeper they will surely heat and spoil, and if they freeze solid it will not hurt them. By so burying they will keep good.

Commenting on the foregoing, the News and Courier says:

"This is the statement of the merits of the plant as made by two experienced farmers who have tried it. Nothing more, we should think, would be required to induce any farmer to try it who regards his own interest. A plant which will furnish excellent food for horses, sheep and cattle, and will increase the milk of dairy cows, which is the healthiest, cheapest and best and a self-harvesting and self-feeding food for hogs, and will feed them six months in winter without other provision, and every acre of which will take the place of five acres of corn for stock-feeding purposes, is a plant which no farmer can afford to neglect, and no intelligent farmer will neglect."

A National Good Roads Congress will assemble at Orlando, Fla., the last week in January next.

Articles of incorporation of the Osceola Co-operative Association have been filed at Kissimmee, Fla., the capital stock being placed at \$10,000. The incorporators are Messrs. R. E. Rose, H. S. Partin, W. H. Mann, J. S. Partin and T. J. Partin. The association has purchased the well-known Southport farm, located near Kissimmee, and will cultivate it on a purely co-operative basis, planting largely of vegetables, cane, tobacco and peaches. Orange trees



on the property are bearing heavily. The parties interested are all practical and successful truckers.

The Manatee County Tobacco Co., of Braidentown, Fla., which was recently organized, with a capital stock of \$15,000, will commence the cultivation of Cuban tobacco.

On November 8 the steamship Bolivia landed 1265 Italian immigrants at New Orleans, the largest number ever carried to that port by a single vessel.

A tract of about 5000 acres of land in Braxton county, West Virginia, has been bought for a colony of French Canadians.

The Penitentiary Board of Arkansas will buy a farm of about 2500 acres and work it with convicts.

Strawberries are now blooming in South Florida, and before Christmas the ripe fruit will be tickling the palates of Northern millionaires—for only millionaires are able to pay the prices that strawberries bring at that season.

The Chamber of Commerce of Huntsville, Ala., has employed an agent to travel in the West in the interest of immigration to Northern Alabama.

A National Tobacco Growers' Convention will meet at Ocala, Fla., January 12, 1897. The governors of the tobacco-growing States, boards of trade and tobacco-growers' associations will send delegates. Secretary Morton, of the United States Agricultural Department, has appointed as national delegates Dr. C. W. Dabney, Jr., assistant secretary of agriculture, and Professor Whitney, of the same department.

A party of eighteen persons went from Hagerstown November 16 to settle at Fruitdale, Ala., where a flourishing colony of Dunkards has been established. The Hagerstown party carried with them three carloads of furniture and farm implements.

## CORRESPONDENCE.

### A Bright Outlook.

*Editor Southern States:*

I live in the neglected part of this great State. Let me instance. This county, Cherokee, made this season 16,000 bales of cotton, yet her fruit crop paid more money

than the cotton. Yet the culture is primitive, and the industry is just beginning to attract attention. Keiffer pears, pomegranates, Japan persimmons and November fruits yet on the trees; gardens filled with Irish and sweet potatoes, beans, peas, tomatoes, spinach, mustard, cabbage, turnips, lettuce, while flowers are in magnificent profusion. While I write this, the 16th day of November, I have in bloom more than fifty varieties of roses, and as many crysanthemums, and hundreds of other flowers. It is a regret to me that our people do not make a greater effort to develop this Arcadia, but they seem to be fully satisfied.

There are located here three large iron furnaces, only one in blast, yet I am informed that the others will go into blast soon. New life seems to have entered into this land. A railway enterprise has lain in a comatose state for two years; the projectors are now at work again. A thousand dormant matters are budding out, and nothing except evil home legislation can keep grand Texas from being the third in wealth and population in 1900. Adverse and demagogical legislation, national and State, has retarded the State for seven or eight years. All now hope that business, and not sentiment, will guide us in all future time.

If Major McKinley would give the South the Secretary of Agriculture, or even the assistant, it would be worth millions to the nation; in fact, as a people, it is all the position in the Cabinet we desire or need. We have enough politicians, but Texas would like to furnish the Secretary or Assistant Secretary of Agriculture.

Can there not be gotten up a representative immigration and business men's congress at Memphis or Nashville next summer, say, just following the meeting of the United Confederate Veterans at Nashville in June? JNO. M. CLAIBORNE.

Rusk, Texas.

## BOOKS AND MAGAZINES.

### Prang & Co.'s Publications.

Christmas would not be the same if we did not have, as an important part of the season's delights, the beautiful Christmas publications of L. Prang & Co., of Boston. From the simple Christmas card of years ago, through all the stages of development up to the splendid works of art of today in



cards, calendars, pictures and books, the Prang publications have shown the highest artistic taste and skill in selection of subject, in method of treatment and in execution. The holiday publications for the season of 1896-97 comprise Christmas cards, books and booklets, artistic reproductions of photographs, photo-color prints, pencil sketches, outline pictures, etc., with calendars as a specialty. Some of these may be seen at the book stores and picture stores, but whether the reader has access to these stores or not, he should send to the publishers for a copy of their illustrated catalogue, unless, perchance, he fears to endanger his pocketbook by an examination of the catalogue's enumeration of art works at seductive prices.

**Greenhouse Construction.** A complete manual on the building, heating, ventilating and arrangement of greenhouses and the construction of hotbeds, frames and plant pits. By L. R. Taft, Professor of Horticulture and Landscape Gardening, Michigan Agricultural College. Illustrated. New York. Orange Judd Co. 208 pages. Cloth \$1.50.

The author of this volume has made, at the Michigan Experiment Station, a careful, comparative test of the various methods of building, glazing, ventilating and heating greenhouses, which he was able to do with scientific accuracy, by reason of his fifteen years' experience in greenhouse management and a large experience in greenhouse construction, together with his careful study of the methods employed by the leading flower and vegetable-growing establishments in the larger American cities. Personal interviews and correspondence with leading florists, gardeners and builders of greenhouses have strengthened the reliability of every statement made in this valuable hand-book. Greenhouses and conservatories, hotbeds and cold frames, forcing houses and pits, all receive full and detailed treatment. The book is liberally illustrated.

Features of the January number of Harper's will be: "Portuguese Progress in South Africa," by Poultney Bigelow; an instalment of "The Martian," by George du Maurier; "A Century's Struggle for the Franchise," by Prof. Francis N. Thorpe;

"Fog Possibilities," by Alexander McAdie; "Science at the Beginning of the Century," by Dr. Henry Smith Williams; "Literary Landmarks of Rome," by Laurence Hutton; "English Society," by George W. Smalley; "John Murrell and His Clan," by Martha McCulloh-Williams; "Indian Giver," a farce, by W. D. Howells; "One Good Time," a tale of rural New England; "A Prize-Fund Beneficiary," by E. A. Alexander, and "In the Watches of the Night," by Brander Matthews.

**An Essay on the Present Distribution of Wealth in the United States.** By Charles B. Spahr, Ph.D. 12mo. 184 pages, appendices, index. (Vol. xii in Crowell's Library of Economics and politics). Price \$1.50.

Dr. Spahr's essay, it is stated, "is written for the instruction of the instructed classes." He begins with a retrospect showing how the distribution of wealth has been changed in England since the latter middle ages. He shows that at the present time 2,625,000 persons in the United Kingdom own £10,700,000,000 of private property, while three-fourths of the population have no registered property at all. Less than 2 per cent. of the families of the United Kingdom, it is shown, hold three times as much private property as all the remainder, and 93 per cent. of the people hold less than 8 per cent. of the accumulated wealth. The same concentration of wealth in the hands of a few, it is claimed, is rapidly taking place in the United States. Before the war slave labor was concentrating property in the South: since the war the industrial revolution is concentrating it in the cities. Dr. Spahr believes that "the public welfare is the supreme law, and the heart and conscience of the nation are bound to give effect to measures which shall make the wealth of the nation synonymous with the national well-being." The book is concise and logical. It appeals to the reason and deserves to be read by all thoughtful men.

The current number of the Political Science Quarterly contains "Trade Union Democracy," "Agricultural Discontent," "Free Silver and Wages," "Silver in Commerce," "After Effects of Free Coinage," "The Colonial Corporation," "The History of English Law," and reviews of recent



books on economic subjects. The Political Science Quarterly is edited by the Faculty of Political Science of Columbia University, and is published by Ginn & Co., 70 Fifth avenue, New York.

The Christmas number of Harper's Weekly will be dated December 19, and will contain short stories by Howard Pyle, Captain Charles King, John Kendrick Bangs and others, with illustrations by Howard Pyle, C. S. Reinhart, Frederic Remington, Peter Newell, Lucius Hitchcock and A. I. Keller. The Christmas "Life and Letters," by W. D. Howells, will be illustrated by Edward Penfield. During the month Col. George E. Waring, Jr., will continue his papers on Street-Cleaning in European Cities. The number of December 12 will contain a striking series of illustrations of the recent strike riots in Colorado. With the first number of the new volume two new serials will begin—"Jerome, a Poor Man," a novel of New England life, by Mary E. Wilkins, and "The Pursuit of the House-Boat," by John Kendrick Bangs, a sequel to his amusing story "The House-Boat on the Styx."

Book News (Philadelphia) for December contains the first article in literary criticism to any magazine by Ian MacLaren, and the only article written by him during his American tour. Brander Matthews contributes to the same number an article helpful to those who have to choose reading matter for the young.

The Atlantic Monthly will publish during the coming season a series of articles surveying the great activities of the nineteenth century, among which will be: "A Century of Exploration"—our knowledge of the earth today in contrast with what was known of it a hundred years ago, and the parts now settled contrasted with the parts settled then; "A Century of Social Betterment"—wherein and by how much the condition of the mass of men, especially in the United States, is better than it was at the beginning of the century; "The Growth of Religious Liberty"—to what extent and by what means religious opinion has been made more liberal, especially by the institutions of the United States; "The Development of American Nationality"—a review

of the events and movements that have profoundly affected our national feeling; an historical answer to the inquiry, What is American Nationality? "The United States Among the Nations"—a review of the growth of international relations as they have affected the United States, and the changes of our attitude to other nations.

The Raphael Tuck Co. (New York, Paris and London) has rendered humanity a service in providing a way of escape from the annually recurring brain racking that is involved in the effort to select Christmas gifts appropriate, worthy to convey the good feeling and good wishes of the giver, and at the same time within the limit imposed by the condition of his pocket-book. Among the superb art publications that the Raphael Tuck Co. is putting out one may find exquisite presents, suitable for everybody, and at prices that make them almost universally available. Surely nothing else would be received with so much pleasure as some selection from the infinite variety of beautifully illustrated booklets, folders, calendars, cards, etc., published by the Tuck Company. Besides these, the company publishes also splendidly gotten up editions of well-known poems, of the works of standard authors, as well as of new books. The company's books for children are known wherever the English language is spoken. In the production of art publications, this house is probably not surpassed in the world. Its holiday publications this year are in advance of the productions of any former year.

## MISCELLANEOUS.

### The Keating Bicycle.

In the continued multiplication of bicycle manufacturers there are a few makers whose machines easily hold the lead and cannot be dislodged from that position. Among these the Keating wheel is conspicuous. No other wheel has shown greater progress in improvement from year to year than the Keating. The manufacturers have from the beginning directed themselves especially to producing a wheel that should combine a minimum of weight with a maximum of strength, and every year has witnessed a reduction in weight without any impairment of strength.

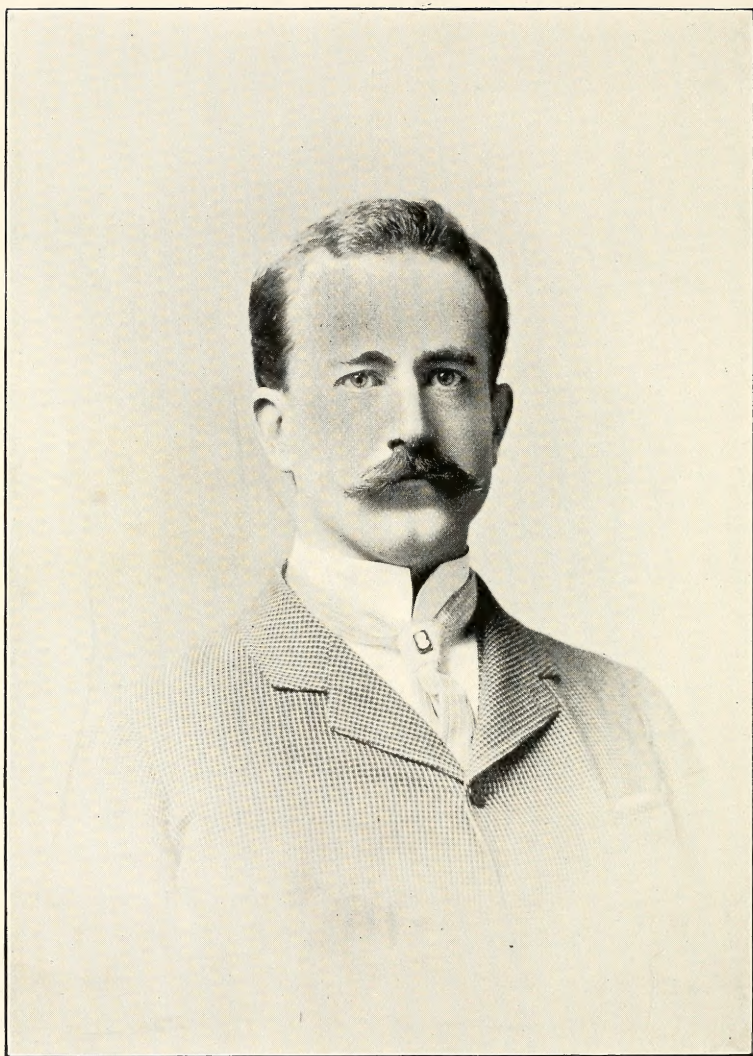
The Keating has some noteworthy special features. One of these is the construction of the centre frame tube. To quote from the company's catalogue:

"A very interesting portion of the Keating bicycle is the peculiar frame. Peculiar because there is not another frame like it made by any manufacturer in the world. Peculiar because of its wonderful strength. Peculiar because it is the only frame built by any manufacturer









JOHN SKELTON WILLIAMS,  
(Of John L. Williams & Sons, Bankers, Richmond, Va.)  
PRESIDENT OF THE GEORGIA & ALABAMA RAILWAY CO.



THE  
SOUTHERN STATES.

JANUARY, 1897.

THE GEORGIA & ALABAMA RAILWAY AND ITS  
TERRITORY.

*By Albert Phenix.*

During 1896 there was hardly a more interesting or important railroad event in the South than the infusion of new life into the property now known as the Georgia & Alabama Railway. Built upon the ruins of the old "S. A. M." road, the line had no sooner passed into the hands of the new organization than a spirit of enterprise was manifested which has already placed the Georgia & Alabama well in the ranks of those roads which are helping the whole South while immediately benefitting themselves by vigorously aiding the development of the country through which they run.

The Manufacturers' Record of August 2, 1895, contained this announcement and prophecy:

"The work of reorganizing the Savannah, Americus & Montgomery under the title of the Georgia & Alabama is at last practically completed by the election of Mr. John Skelton Williams, of Richmond, as president; Cecil Gabbett, vice-president and general manager; J. Willcox Brown, treasurer, and W. W. Mackall, of Savannah, secretary. Among the directors are Mr. Adolph Ladenburg, of the banking and foreign-exchange firm of Ladenburg, Thalmann & Co., of New York; C. Sydney Shepard, of New York; J. W. Middendorf, of Middendorf, Oliver & Co., Baltimore bankers; R. B. Sperry, Baltimore; John Flannery and John K. Garnet, of Savannah; James D. Stetson, of Macon, and S. A. Carter, of Columbus, Ga. Mr.

Williams, who is a member of the banking firm of John L. Williams & Sons, of Richmond, has been at work upon the reorganization of the property for some months, and is well known as a gentleman of ability and energy, also as an expert financier. Mr. Willcox Brown is president of the Maryland Trust Co. of Baltimore, while the majority of the other directors are connected with prominent banking or business institutions. The Manufacturers' Record believes that under the present management the road will be operated for the best interests of its stockholders and the section of the South which it traverses.

"The Manufacturers' Record is informed that the company will extend its system into Savannah at once. With Savannah as a terminus, the Georgia & Alabama will be the shortest and most direct route between Savannah and Montgomery. There is every reason to believe that with the through traffic which it will receive by forming the direct route between these cities, and added to its local traffic, the earnings will materially increase this year."

Not only has every expectation here hazarded been fully realized, but the activity of the new management has greatly exceeded the measure here put upon it. One of the first things the new company did was to secure by perpetual lease from the Central of Georgia Railway Company the fifty-eight miles of road extending from the



terminus of the Georgia & Alabama tracks at Lyons eastward to Meldrim and to effect a traffic arrangement on the seventeen miles from Meldrim to Savannah by which the Georgia & Alabama secures the full benefit of the Central's splendid terminals at Savannah. Early in the year the Abbeville & Waycross road was bought and extended to Fitzgerald. The entire main line is being overhauled, and by cutting down grades, straightening the line where feasible, reballasting where necessary and relaying a number of sections with heavier steel rails, the physical condition of the road is being brought up to a high standard of excellence. The train service was also immediately improved, the running time between Montgomery and Savannah reduced to eleven hours and an additional train put on, so there is now a double daily passenger service, with parlor cars and Pullman sleepers and every comfort and convenience provided by the best-equipped roads in the country. Energetically reaching out after business of all kinds, passenger and freight, through and local, there is every probability, from gains so far made, that the company's gross earnings for the first year since its entrance into Savannah—April 1—will exceed \$1,000,000, which is 100 per cent. increase over the previous year's business. The line is by seventy-two miles the shortest between Montgomery and Savannah, and this fact, in connection with its excellent train service, is attracting an ever-increasing volume of through business, both freight and passenger. It is becoming a favorite route for the metal and mineral products of Alabama and for general Western products seeking shipment through the port of Savannah, and has become immensely popular with the traveling public, who are afforded at Savannah the choice of a sea voyage to Eastern cities on the splendid boats of the Ocean Steamship Co. and the Merchants & Miners' Transportation Co., or, if time is a special object, connection may be made with either of the two trunk lines that oper-

ate from Savannah north. In addition to the Pullman car service now operated between Montgomery and Savannah, preparations are being made to put on a through Pullman to run from the cities of the Northwest via the Georgia & Alabama through Savannah to Florida, giving passengers in transit from six to twelve hours, if desired, to view the many attractions possessed by Savannah.

Enterprise marks every feature of the management, and is conspicuously manifested in the policy of giving every assistance possible to the work of developing the varied resources of the territory through which the road runs and to securing immigration to occupy the hundreds of thousands of vacant or but partially tilled acres that are embraced in its tributary territory. Immigration agents, in person and by literature, canvass the West and Northwest; statistics and interesting facts concerning the attractions and business opportunities existing in the various towns and cities along its line are disseminated, and widely-advertised homeseekers' excursions are run at various times throughout the year. It may be readily seen, therefore, that this road is destined to play an important part in the development of a portion of the South rich in a great variety of natural resources and abounding in opportunities for the establishment of many enterprises; and it is furthermore a road which will be found a factor of growing importance in the handling of transcontinental business.

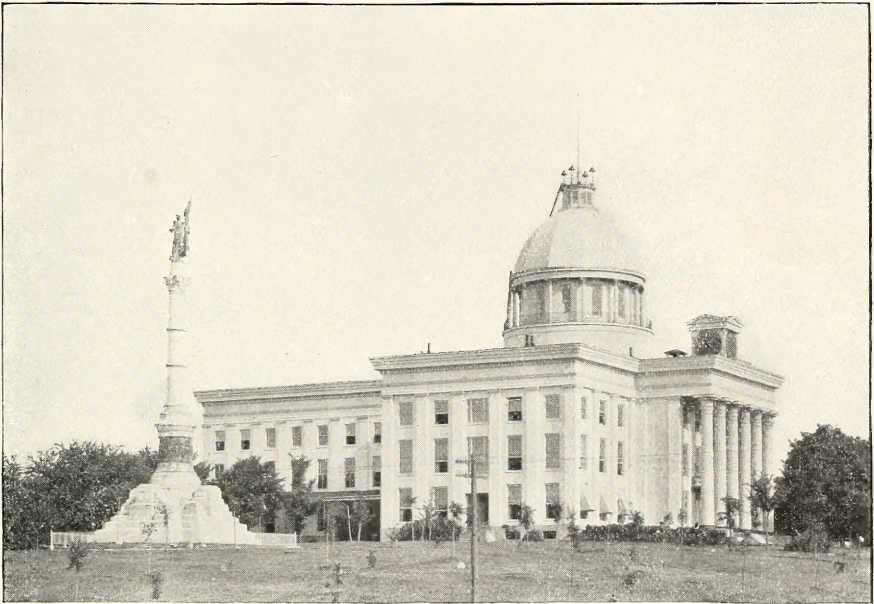
The historical and beautiful old city of Montgomery, the western terminus of the Georgia & Alabama Railroad and the junction point of some of the most important roads in the South, is interesting in many ways to the investigator of Southern conditions. It is located at a bend in the Alabama river, its site is pleasingly broken, while not precipitously hilly, and its broad avenues and tree-lined thoroughfares lend a charming grace and dignity to its aspect. Hardly anywhere can be found a more noble prospect than is



presented by the sweeping stretch of Dexter avenue from the imposing fountain up to the glittering old white capitol on the hill. It is in miniature, it is true, compared with the Champs Elysées or our own Pennsylvania avenue, but within its limitations it is well nigh a perfect picture, and to its beauty is added the interest which attaches to scenes of mighty conflict, for this house at the end of the avenue was the first capitol of the Confederacy, was where Jefferson Davis took his oath of office as President, was long

neatness not too frequently met with in Southern cities. And as first impressions are strong ones, such work as has been done by Montgomery is of unquestionable value wherever any effort is to be made to attract outside men and money.

There is an air of solid, substantial prosperity about Montgomery, and investigation shows it to be an important business point, as well as a desirable place for residence. It is in the midst of a particularly rich agricultural section, and the vast mineral and



Montgomery, Ala.: State Capitol and Confederate Monument. This Building was used as the First Capitol of the Confederacy, and Jefferson Davis was inaugurated as President here.

known as "the White House of the Confederacy," and as if to forever fix this romantic interest, to identify indissolubly the part it played in the struggle of the "Lost Cause," there has been erected by its side a towering monument to soldiers of the Southern armies who fell in defense of the government here first set up.

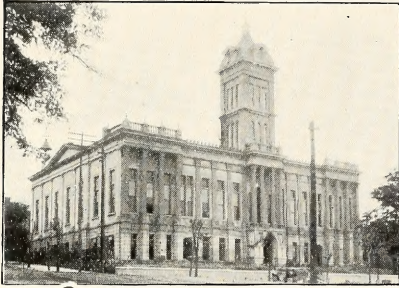
The visitor to Montgomery will be first attracted by its well-paved streets and its smooth stone sidewalks, which cover all the main business portion of the town and give an air of thrift and

other natural resources of Alabama make possible a very large industrial development here. The foundations laid are broad and permanent. A perfect system of sanitary sewerage is in operation, artesian wells supply a practically inexhaustible supply of pure water, and the health-rate is consequently so high that deaths, white and black, average only a total of thirteen to the thousand per annum.

As Montgomery is an old place, coming into existence in 1819, and having been incorporated ever since



1837, it goes without saying that social conditions are all that are expected of well-established Southern cities. It has been the State capital



Montgomery, Ala.: Courthouse.

since 1846, and for more than half a century has been a centre of gracious hospitality, culture and refinement.

Aside from the advantages of geographical position and the wealth of its agricultural resources, Montgomery has been aided in becoming an important point by the excellence of its transportation facilities. The union depot system, so convenient and advantageous to a city in every respect, is established here, and the benefits of quick and direct connection with roads radiating in every direction is thus obtained. Work is at present under way on an imposing and spacious union passenger station, and a mammoth union freight depot is nearing completion. Transportation facilities are superlatively excellent, some of the best roads in the South centering here. The Louisville & Nashville is here, giving quick communication with Mobile, Pensacola and New Orleans on the south, and with Memphis, St. Louis, Nashville, Evansville, Louisville, Cincinnati and points beyond in the west and north. The Western & Alabama and Atlanta & West Point, which runs from Selma via Montgomery to Atlanta, enjoys a close traffic arrangement with the Southern Railway, whose passenger trains are now run solid from New York via Atlanta, Montgomery and New Orleans to Galveston. The Plant system is here through its Alabama Midland line, and runs through trains to Savannah,

Charleston and all Florida points. A branch of the Central of Georgia terminates here, and thus, with the quick and direct route via the Georgia & Alabama to Savannah, it is seen that the railway transportation facilities are complete in every direction. And in addition to the railroad transportation there is the Alabama river, on which boats run regularly to Mobile, thus insuring forever the lowest possible rates on freight in and out of Montgomery.

To a degree, Montgomery enjoys natural advantages over any possible rival somewhat similar to those of Memphis. Within a large surrounding section it is practically without a rival, and in an area of 25,000 square miles the local trade is preferably done at Montgomery. Out of these conditions a large jobbing trade has been built up, which gives Montgomery a place second only to Memphis as the leading wholesale grocery point in the South; and in other lines Montgomery's jobbing trade is large and constantly increasing. The wholesale houses already include boots and shoes, hats and caps, notions, dry goods and liquors.

The total annual trade of Montgomery is about \$40,000,000, and it has for years shown a constant and steady increase. The average amount of sales of staples marketed at Montgomery is \$23,000,000; the average yearly sales of merchandise consumed in the territory trading here, about \$12,000,000.

Without any excitement or the employment of other than the most con-



Montgomery, Ala.: Federal Building.  
(Postoffice and U. S. Court.)



servative business methods, Montgomery is steadily marching on to the fulfilment of her destiny as one of the most important trading and manufacturing cities of the interior South. With the snap and push of Atlanta, for instance, she might have made a greater noise in the world, and might have secured more than the 35,000 people with which she is now credited, but her people are proud of the fact that no backward steps have been taken, and that all of her development has been along natural lines, has been substantial and permanent. With so much cotton at her doors, it would occur to the casual observer that cotton mills ought to be more extensively established here, but in addition to the mill now in successful operation, there is being constructed a new \$200,000 mill, with 10,000 spindles and 320 looms, which will be in complete order and ready to start by the first of next May. That the citizens of Montgomery are not indifferent to their opportunities, and are proceeding to utilize them, is shown in the fact that this new mill is entirely a local enterprise, and the stock was subscribed by the home people.

The various manufacturing establishments of Montgomery show a wide use of the resources of the section already. There are some 130 establishments of various kinds, employing 2700 hands and turning out annually products of about \$10,000,000 value. The articles include cotton goods of all kinds, cottonseed oil, fertilizers, soap, sash, doors and blinds, brick, barrels, staves, spokes and handles, beer, whiskey, crackers, candies, cigars, flour, ice, drugs, brooms, clothing, jeans pants, carriages, lumber, and there are planing mills, extensive boiler works and one of the best equipped foundry and machine shops in the South. So that, while there still exist great opportunities for industrial development, it is evident that the field has been by no means entirely overlooked either by home people or Northern men looking for a desirable Southern field.

The banking capital of Montgomery is about \$2,000,000. In addition to national and State banks, there are banks for savings, showing large deposits, and for the further benefit of people of small means there are numerous national and local building and loan associations.

Owing to the fertility of the lands surrounding Montgomery it is naturally a large market for cotton, corn, hay, oats, potatoes, as well as fruits and small vegetables. In cotton receipts it is one of the leading inland markets of the world. The receipts by years since 1887 are:

Year.	Bales.
1887 .....	99,562
1888 .....	107,508
1889 .....	107,160
1890 .....	145,045
1891 .....	151,478
1892 .....	157,187
1893 .....	110,719
1894 .....	131,646
1895 .....	123,000

On account of its transportation facilities and the large volume of business transacted, Montgomery is a particularly good cotton market, and prices often range higher here than in the interior cities and towns. The bulk of it is, of course, pressed in the immense compresses of the city and shipped to Eastern and foreign ports. Through bills of lading are issued at Montgomery through either the Gulf or South and North Atlantic ports to all ports or markets of Europe.

While surrounding Montgomery there are no vast tracts of unoccupied lands, so that colonization enterprises in the immediate vicinity are impossible, yet there are plenty of farms, large and small, which are obtainable in every direction and at reasonable prices. Desirable farming lands near Montgomery can be bought for from \$6 to \$25 an acre, and most any kind of soil can be had, from gray oak and hickory lands to alluvial bottom lands and the black, waxy prairie lands, beginning south of the city. In this variety of soils, literally about everything required for the sustenance and comfort of man and beast may be raised, and while cotton will doubtless still hold its sway here as elsewhere in the South, there is a growing disposi-



tion to supply all local demands with home-grown products. There is always an excellent market at Montgomery for all agricultural products, and within recent years it has become a big market for horses, mules and cattle. Dairy farming and stock-raising have been more extensively engaged in recently, there being some twenty-five farms near Montgomery principally devoted to these undertakings and all with marked success. But

Truck farming and fruit-raising have been demonstrated to be highly successful and remunerative, and not only is the local market supplied, but large quantities of fruits, vegetables, melons and berries are shipped from here to Michigan, Illinois, Ohio, New York and other States.

A well-equipped commercial and industrial association is undertaking to foster immigration and industrial growth for Montgomery city and



Montgomery, Ala.: Dexter Avenue, leading to State Capitol.

the supply of these products is as yet not nearly equal to the demand. The great variety of grasses which grow luxuriantly here, the equable climate, the reliable rainfall (about 54 inches annually) and the certainty of a demand for all products raised offer strong inducements to a much greater expansion of these industries.

A remarkably good and extensive system of county roads is a factor in the development of the agricultural interest of this section, which must prove to be of ever-increasing benefit and importance.

county, and backed by the railroads and an adequate degree of co-operation on the part of the citizens it would seem that the interested attention of homeseekers and investors should be attracted to the superior advantages possessed in so many directions by the city and county of Montgomery.

Along the line of the Georgia & Alabama Railway, proceeding eastward from Montgomery, are some of the most fertile and highly-cultivated farms in Alabama. Statistics concerning the counties of Alabama traversed



by the road are as follows (census of 1890):

	Sq. Miles.	Population in 1890.	Bales cotton produced.	Bushels corn produced.	Bushels other grain.
Montgomery	740	56,172	45,860	739,516	55,972
Macon	630	18,937	19,099	316,365	47,220
Russell	670	20,521	20,721	318,550	54,971

While largely devoted to cotton-raising, it will be seen from the figures given that these lands are well adapted to general agricultural purposes, and that grain-growing is already extensively engaged in. As the Chattahoochee river is approached the character of the lands changes somewhat, and while not so productive as the black prairie lands around Montgomery, they are still very fertile and well adapted to general agriculture, stock-raising and fruit-growing, grapes especially doing well.

There are large quantities of hardwood timber along the streams in this section, oak, hickory, poplar and ash predominating, and a considerable industry is being developed in sawing and shipping this timber for manufacturing purposes to various parts of the country. As the more rolling and broken lands of Eastern Alabama are reached an increasing growth of yellow pine is encountered. These rolling timbered lands are generally without undergrowth, and are especially adapted to stock-raising. Beef cattle from this section are now shipped to Montgomery, Atlanta, Charleston, Savannah and Jacksonville. The splendid grazing afforded by these lands, in connection with proximity to cottonseed-oil works, makes stock-raising very profitable, and it is largely engaged in. After grazing all summer and fall the stock are put up and readily brought to marketable condition by being fattened on cottonseed meal.

Although not yet specially engaged in, a large portion of this section is well adapted to hog-raising, the quantities of acorns and other nuts providing an abundantly nutritious mast. There is some sheep-raising, and the number of living streams, abundance of shade and good grasses afford ad-

mirable conditions for a large development of this industry.

It is noteworthy that few sections anywhere have better railway facilities than this portion of Alabama, through which the Georgia & Alabama road runs. Four lines of railroad traverse this section, so that no farm along the line is more than ten miles from a competing road, which gives assurance of equitable freight rates and is a pledge that each road will do all in its power to encourage the upbuilding of the territory that is immediately tributary to it. Another item, outside of the advantage obtained through having at Hurtsboro a connection with a branch of the Georgia Central, is the fact that the Chattahoochee is navigable between Columbus and Apalachicola all the year round.

An evidence of the healthfulness of the country, as well as the fertility of the lands in the section between Montgomery and the Chattahoochee, is furnished in the fact that twelve flourishing towns and small trading centres have sprung into existence along the line of the Georgia & Alabama Railway since the construction of the road six years ago.

Immediately on crossing the State line between Alabama and Georgia a difference is noted in the character of the country. After passing over the magnificent steel bridge which spans the Chattahoochee a two-mile stretch of fertile bottom lands is struck, not exceeded in fertility by those of any section. Running right up to the tracks are the lands of Mr. E. M. McLendon, who has successfully demonstrated the capabilities of this section in a way interesting to all. His tract contains 1700 acres of the famous Chattahoochee river bottom lands, and he is successful on a big scale as a dairyman, a stock-raiser, a scientific farmer and a cotton-raiser.

Two miles east of the river is the flourishing trading centre of Omaha, another new town built up since the railroad was completed. It is a growing cotton market, and boasts of one of the finest water-powers of the State,



obtained from the Hamahatchee river. This power is utilized to drive one of the best equipped hulling and ginning plants in the South. Here is also found one of the best beds of brick clay in



Montgomery, Ala.: City Hall.

the country. All the brick used by the railroad company is made here, and the Omaha brick have been used extensively by builders elsewhere, notably in the handsome new courthouse at Lumpkin, the county-seat of Stewart county.

Proceeding eastward from Omaha the lands become more broken. The country is well watered by living streams, and along these streams are some of the best farms in this section. Attention is devoted to general agri-

culture, cotton predominating, but diversified farming is the rule instead of the exception.

On the highest point between the Chattahoochee river and Savannah is situated the town of Lumpkin, a thriving business centre of 1500 people and one of the healthiest points in the South. Before the war the wealthiest planters of this region lived at Lumpkin, and there was more money here than at almost any other point in the State. The people are still noted for their culture, refinement and hospitality, and it is believed that when the advantages possessed by the country around Lumpkin have become more generally known it will become one of the most thickly settled portions of the State. It is better watered by living streams than any other county in the State, and is not exceeded for stock-raising and fruits. It is somewhat hilly, but when the hills are set in Bermuda grass and planted in orchards it will become very like a paradise. Being above the frost-line, the finest of peaches are here a reasonably certain crop, and there is inevitably bound to be a large development of the fruit industry here. It is a good cotton mar-



Montgomery, Ala.: Court Square and Commerce Street.



ket, between 6000 and 7000 bales being marketed here annually.

Not far from Lumpkin is the new town of Richland, at the junction of the Georgia & Alabama with the Columbus Southern, a comparatively new road, running from Columbus to Albany, a distance of eighty-two miles. This road has just been purchased by the Georgia & Alabama, and that part of the road between Richland and Columbus will hereafter be known as the Columbus division of the Georgia & Alabama, and the part between Richland and Albany as the Albany division. In accordance with the characteristic enterprise of the Georgia & Alabama, the old schedule on the Columbus Southern was at once revised and another train added, so as to give three trains each way daily, and this is now the quickest and best route between Columbus and Albany and all points on the Georgia & Alabama Railway.

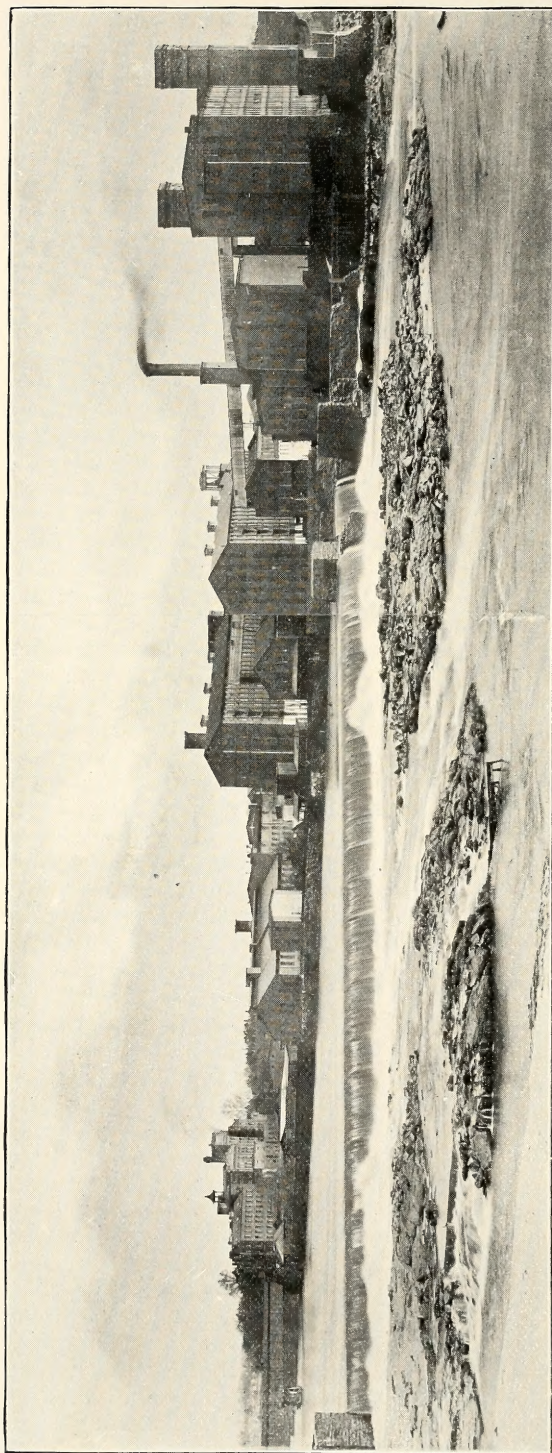
Richland is a substantially-built town of about 1000 inhabitants, having brick business blocks and a growing trade. Around here for a radius of ten miles in every direction is a section of red chocolate lands, the same as characterize the country about Fort Valley, Ga., in the centre of the Georgia Peach Belt. As an evidence of the special adaptability of these lands to peaches it may be mentioned that the finest carload of peaches ever marketed in Chicago was taken from a three-year-old orchard located within the city limits of Richland. Grapes also do exceedingly well here, and so great has the demand become that Richland-grown grapes are sold before ripening on their reputation alone.

Richland is in the centre of Stewart county, and is a very excellent trading and distributing point. Here all agricultural products do exceedingly well, and the cheapness of the lands, from \$5 to \$15 an acre, gives opportunity for substantial profits in farming enterprises. Within this section of ten miles in diameter is grown a peculiar cotton of long fibre and unusually silky texture, coming nearer the long

staple than any other not the long staple, and being in great demand at enhanced prices by manufacturers of cotton thread.

In Columbus the Georgia & Alabama acquires as a feeder a manufacturing centre of great importance, and Columbus considers it a fortunate thing to have become identified with this enterprising railroad. Columbus, with a population now in city and suburbs of some 33,000, seems destined to become a manufacturing city of the first importance, being surrounded by a wealth of natural resources and having within a distance of two and one-half miles along the Chattahoochee river water-power capable of developing an average of 40,000 to 50,000 horse-power during ten months in the year, with a minimum of 20,000 horse-power at the lowest stage the river ever reaches. While Columbus is already a manufacturing town, distinctively, with numerous and varied industries of large magnitude, so small a part of the splendid water-power has as yet been utilized that what has been done seems more of a promise than a fulfillment. There are but two developed water-powers, both in the city limits, and with a total of only about 6000 horse-power. Of the 115 feet of fall within two and one-half miles, eighty-two feet are as yet undeveloped. Some years ago an association was formed to develop the upper falls. A tract of 355 acres of land, known as North Highlands, lying along the river, and including one of the most important of the falls, was platted for factory sites and residences. The electric cars were extended to it, a fine casino and music pavilion were constructed and a grand boulevard built around the high, overhanging cliffs. Plans were all but consummated for building a dam and developing this as well as other powers in the vicinity when the hard times brought the negotiations to a standstill and practical disintegration followed. The boulevard is still a picturesque drive and popular the year round, and the casino and the rustic grounds swarm





Columbus, Ga.: Eagle and Phenix Mills and Water-Power.

with merry-makers during a good portion of the year, but the commercial aspect of the situation is in abeyance, waiting the advent of means and men who will seize the singular opportunity to utilize a power greater than Columbus yet possesses, greater than is possible at almost any other spot in the country within two miles of the junction point of seven railroads.

But the power already in use puts Columbus well in the forefront of Southern manufacturing cities. The famous Eagle and Phenix Mills, the oldest and the largest, has a minimum of 4000 horse-power, with which it operates three cotton mills and one woolen mill, and the city mills (flouring) will have 2000 horse-power when improvements at present under way are completed.

In addition to running the mills, this power is utilized to the vast advantage of the whole city by the Brush Electric Light & Power Co., a corporation of which Mr. John F. Flournoy, of Columbus, is president, and in which his efforts have secured the investment of some \$500,000 of Philadelphia money. Mr. Flournoy is also president of the Columbus Railway Co., and these companies by their operations have banished the mule from the street car, consolidated the lines into one system, which literally covers the town; provided a system of electric lighting which by March 1 will comprehend all the arc and incandescent service in the city, and still reserving ample power to rent to factories of all kinds. The newspaper offices, several clothing fac-



tories and others are now using this power, and its adaptability to every kind of industry is demonstrated in a contract recently made by which a meat dealer gets the transmitted electric power applied to his sausage grinder. To many manufacturers, large and small, it is a big thing to be relieved of the expense of putting in boilers and engines, and this feature of the industrial situation at Columbus must prove a strong factor in attracting outsiders.

The railroad company has done another thing which, next to the availability of cheap and abundant power, gives Columbus pre-eminence among desirable factory locations. Included in the twenty miles of road operated by the company is a belt line, which connects with all the roads entering the city. Its tracks are laid wherever there is an industry or a jobbing house doing any business of importance, so that cars are loaded and unloaded at their very doors, and the former drayage charges of \$5 to \$8 a car are eliminated. To the discerning observer it is patent that these two features of power and house tracks are alone sufficient to insure the industrial and commercial development of Columbus to proportions far beyond those of the present. But numerous other elements of expansion exist, among which is proximity to the coalfields of Alabama, which makes fuel so cheap that some of the factories at Columbus are successfully operated by steam.

The list of industries at Columbus includes six cotton mills, with 79,992 spindles and 2822 looms, of which the Eagle and Phenix Mills have 47,496 spindles and 1600 looms. The product of the mills includes almost every variety of manufactured cotton goods, from the coarsest sheetings to the finest print goods, which are marketed all over the world. There are also woolen mills, four clothing factories, three iron and machine shops, very extensive plow works, two cottonseed-oil mills, two of the largest flouring mills in the South, one fertilizer factory in operation and another much larger

one being built, four ice factories, two barrel factories and various smaller industries. There is an abundance of raw material of all kinds, and plants for the manufacture of cotton, iron and wooden products are certain to increase in number. There are 150,000 bales of cotton handled in Columbus annually, much of it an extra fine staple, so that a choice at minimum prices is afforded the manufacturer.

Columbus is an old and wealthy city, and contains a number of citizens of conspicuous enterprise. There are five banking institutions, which afford ample money for the needs of the merchants and manufacturers of the city. Here is located the Georgia Home Insurance Co., one of the most successful and extensive companies in the South. The history of this company is full of interest and value to anyone investigating Southern institutions and financial opportunities. Organized in 1859 to do life, fire and marine insurance, with a capital of \$300,000, 5000 shares at \$60 par value, it had hardly got started before the war came on, and though continuing in business, the end of the war found the company in a somewhat involved condition. Soon after the war the company passed into the control of Mr. J. Rhodes Browne, a Northern man of tact, ability and enterprise, and under his judicious management it was soon put upon a paying basis, doing a fire insurance business alone. The stock had depreciated till it had but little value, and 2000 shares were bought by the company and cancelled and the value of the remaining 3000 shares raised to \$100 a share. The capital stock has never been increased, remaining still at \$300,000, but the company has steadily prospered, until today it has a list of gilt-edged assets aggregating \$1,157,902, and its stock can't be bought in any quantity even at a price largely in advance of par value. For many years past the company has paid an annual dividend of 12 per cent., which is of itself an achievement equaled by mighty few corporations South or anywhere else,



and yet the institution is a peculiarly Southern one. While it covers a wide range of country, and in its field is well and favorably known and largely patronized, no attempt is made to go outside the South, the limits of its operations being the Potomac and the Rio Grande. It has achieved an enviable record for prompt and fair dealing, and wherever known is looked upon as one of the progressive and enduring institutions of the country. Of incidental interest is the fact that Mr. Lambert Spencer, father of the Southern Railway president, Mr. Samuel Spencer, was secretary of the company

their capacity with tourists, who, finding excellent accommodations at hand, choose this mode of getting into Floridian waters and among the islands and coast resorts which are so famous for the superexcellence of the shooting and fishing they afford.

A fine agricultural country furnishes a basis for development which, independently of the industrial features, would go far toward creating an important trading centre here. Good lands, a rich sandy loam predominating, are characteristic of Muscogee county, and with a high health rate, an equable climate, adaptability to a great variety of crops and cheap prices for lands, a large immigration movement will undoubtedly be attracted. The first colony settlement in the vicinity of Columbus has just been made by

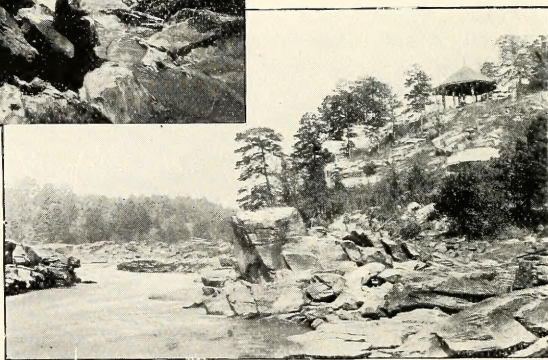


for many years and until his death in 1880, when he was succeeded by Mr. Wm. C. Coart, the present secretary.

In addition to its other enterprises, Columbus has a large jobbing business, covering eleven Southern States, and representing dry goods, clothing, boots and shoes, groceries, etc.

Of course, river transportation the year round must be reckoned as one of the strong points Columbus possesses. Four lines of steamboats ply the Chattahoochee between Columbus and Apalachicola. These water lines get the trade on both sides of the river from thirty to fifty miles back, and, including Columbus, make connections with fifteen railroads at various points along the river.

A feature of interest in connection with steamboating is the fact that these boats are frequently crowded to



Columbus, Ga.: Undeveloped Water-Powers above the City.

a society of professional men, mechanics and farmers, with their families, on a 1000-acre tract twelve miles from Columbus. The present membership of the colony amounts to about 300, but it is expected that considerable accessions to this number will be made from time to time, as this settlement is the outcome of a movement inaugurated by a society in Chicago some time ago, and the membership of the society includes representatives in nearly every State in the Union. The place chosen for the settlement was selected by a locating



committee acting for the society, and had in its membership one man from Ohio, one from Canada and one from Florida. A great deal of time was spent in looking for a desirable place, and the people of Columbus and Muscogee county consider the selection a substantial recognition of their advantages.

While this is the only colony movement to this vicinity, there has been individual immigration from many outside places for years, and some of the most successful farmers, dairy-men, fruit-raisers and truck-growers here are immigrants. Dairying on a scientific plan was first introduced by men from Iowa and Ohio, and is now engaged in by a number of people with good profits. Fruit, grapes, melons and truck are being raised more and more each year, and the profits warrant a much more extensive prosecution of these industries. From thirty to fifty carloads of Concord and other grapes are annually shipped on roads running out of Columbus; 1500 carloads of melons are being handled through Columbus, some of the melons weighing from forty to sixty pounds; turnips are raised weighing fourteen pounds, from two and one-half to three pounds being by no means an uncommon weight, and sweet potatoes, tomatoes, beans, etc., are thrifty and profitable crops. Pearl or cat tail millet, Kaffir corn, milo maize, amber cane and other forage plants thrive like native grasses.

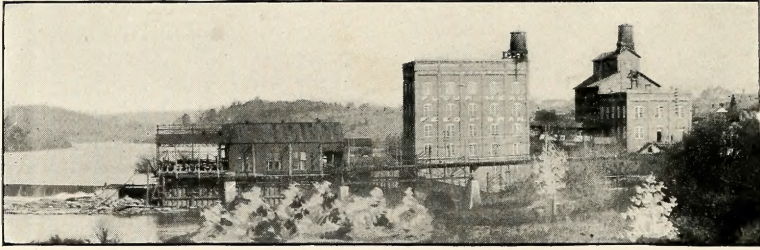
An interesting example of what enterprise and ability may do here is furnished in the achievements of a Frenchman named D. Lief Frank, who, ten years ago, took a badly-washed hillside farm of fifty acres four miles from Columbus and set it out in scuppernong grapes. The place was hardly considered worth \$5 an acre when he took hold of it. He now has 4000 bearing plants, which yield all the way from two and one-half to four and one-half bushels of grapes to the plant, and he gets three gallons of wine to the bushel, or a total annual yield of some 50,000 gallons of wine. As he under-

stands how to treat the wine, producing an article infinitely superior to the oversweet, insipid stuff most frequently encountered under the name of scuppernong wine, he is enabled to sell his entire product in New York and Philadelphia at figures which yield him an exceedingly handsome profit on his labor and investment, which, by the way, are greater than might at first appear, as he never markets his wine till four years old. Of course, it takes knowledge and patience to accomplish such results, but that they have been accomplished establishes the capacity of the soil and climate.

What is being done in a smaller way all over this section, Mr. H. L. Woodruff, a wealthy flouring-mill man of Columbus, is attempting on a broad scale on his farm of 607 acres fourteen miles south of the city. He has set out 11,000 peach trees, 1000 Keiffer pear trees, 1450 apple trees, 2500 paper-shell pecan trees, 650 wild-goose plum trees, 150 Botan plums, which he proposes to increase to 11,000, besides a number of English walnuts and mulberry trees. He has 1000 scuppernong grape vines and 45,000 strawberry plants, which he expects to double in number by spring. This extensive place he has been carefully cultivating for a number of years purely as a commercial venture, and results so far justify him in expecting profits of 25 to 30 per cent. on the investment.

Throughout its length the country traversed by the Columbus Southern is a fine agricultural and fruit section, and its speedy development may now be confidently expected. Outside of Richland, the important towns on the line are Dawson, a thriving town of 2500 people, where a connection is made with the Central of Georgia Railroad, and Albany, the terminus, which is one of the best cities of Southwest Georgia. Here connections are made with the Plant system of roads, the Central and with the boat lines which ply the Flint river. Albany has 7000 population, fine schools, broad, well laid-out streets, numerous fac-





Columbus, Ga.: City Mills and Water-Power.

tories and the largest wholesale grocery house in Southwest Georgia. The country around Albany presents a variety of attractions to the agriculturist, the fruit-grower and the truck-raiser, and it has received a good share of the immigration secured by Southwest Georgia. Its location, its excellent railway facilities, its river transportation, its healthfulness, its fine artesian water—these added to the advantages of climate and soil give to Albany and its tributary country the promise of a development of large importance.

Coming back to the main line, shortly after leaving Richland, going east, Webster county is entered, which, according to its size, is one of the best cotton and corn counties in the State. Here the lands break off into gray pine and oak. This county likewise offers excellent inducements for stock-raising, which is successfully pursued by many of the best farmers in the county. A number of large streams flow through the county, completing the conditions favorable to stock-raising. Preston, the county-seat of Webster, is a thriving town, enjoying a good trade and building up with the growth of its tributary country.

No other town is reached until after passing into Sumter county, the banner county of Southwest Georgia. It has a greater variety of soils than any other county through which the Georgia & Alabama road runs, and is consequently adapted to a wider range of products, and it has moreover utilized and developed its resources to a greater extent than has almost any other county in the State. It stands

easily first in number of bales of cotton produced, in bushels of corn raised and in other grains grown, as evidenced by the census report of 1890 on counties in Georgia through which the Georgia & Alabama road runs:

	Sq. Miles.	Population in 1890.	Bales cotton produced.	Bushels corn produced.	Bushels other grain.
Stewart .....	440	15,682	19,351	343,243	65,478
Webster .....	230	5,695	6,895	158,212	18,340
Sumter .....	520	22,107	22,448	421,238	78,330
Dooly .....	780	18,146	15,780	363,880	38,543
Wilcox .....	500	7,980	2,595	100,758	17,046
Dodge .....	581	11,452	4,952	128,378	11,365
Telfair .....	420	5,477	2,067	41,787	65,036
Montgomery ..	720	9,248	2,215	168,865	23,428
Tattnall .....	1,100	10,253	2,957	157,587	10,562
Bryan .....	400	55,520	684	58,120	12,638
Chatham .....	400	57,740	9	37,675	2,733

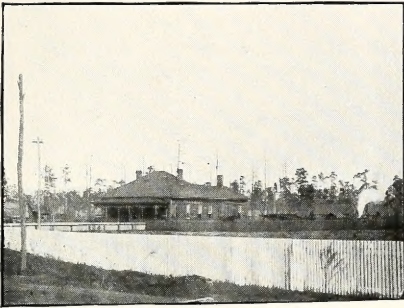
The fruit lands of Sumter are identical in character with those which have made the Fort Valley district famous, and its list of profitable crops includes about everything in the way of grain, fruit and grasses grown in the temperate zone. All kinds of stock can be raised with advantage, and it is furthermore a comfortable and healthy place to live, the range of temperature being about 70° on an average, providing against extremes both in winter and summer. It has also some good timber, the southeast corner especially containing a large tract of long-leaf yellow pine, while along the Flint and other rivers are quantities of hard wood, oak, poplar, ash, gum, etc.

An enumeration of the various products of Sumter county resembles somewhat a page from the Agricultural Department's report for the whole country.

While changing conditions in the



South show every year an increasing departure from the pernicious "one-crop" practice formerly so generally in vogue, cotton is still the king of money crops, as it must ever continue to be, for this is the one product which commands money anywhere and at all times. Constant agitation of the subject, and disaster attending some years of abnormally low prices, have quite generally induced planters through-



Farm Home in the Pine Belt.

out the South to engage in more diversified farming, so that food supplies are more nearly produced at home than formerly, but large cotton crops are likely to continue to be raised in sections adapted to this staple.

According to the census figures of 1890 there were 22,448 bales of cotton raised in Sumter county, an average of more than a bale to each inhabitant of the county, and the ratio is about the same each year.

The corn crop of Sumter county is about 500,000 bushels a year, and comes next in importance to the cotton crop. The yield per acre is from twenty to forty bushels, and it is, as a rule, a certain and profitable crop.

Wheat is raised to some extent, and where given proper care and attention may be expected to yield from twenty to thirty bushels to the acre, but it is unlikely that it will be raised largely on a commercial basis, such as is grown being generally for home consumption.

Certain varieties of oats give an abundant and reliable yield, ranging from twenty-five to as high as seventy-

five bushels to the acre, and maturing early enough for a second crop on the same land.

The usual Southern forage crops of field peas, Bermuda and other grasses give abundantly satisfactory results, as do red and white clover, German millet, etc. Some experiments in alfalfa have shown quite marvelous results. On a 50-acre patch near Americus seven tons to the acre were raised during the past year, and on a portion of it seventeen cuttings were made which yielded fourteen tons to the acre. As the crop sells for \$17 a ton, and costs only about \$4 to raise, there was an exceedingly handsome profit in the undertaking. The land on which it was raised, by the way, recently sold for \$8 an acre, and probably couldn't command more than double that price today, simply because of the large area of uncultivated land.

Melons, truck and fruit must continue to receive increased attention, particularly at the hands of newcomers to this section.

The Georgia watermelon has long been a well-known visitor to the Northern markets, and Sumter county's quota is already very large. With soil and climate perfectly adapted to their growth, and because of the small expense raising them entails, there is a further large field for developing this industry.

Two crops of sweet potatoes can be raised each season at small expense and with little care, and conditions are entirely favorable to the equally successful cultivation of the Irish potato.

An industry which, while not representing a very large volume of business, still shows such profits as seem to promise extensive development, is the growing of sugar-cane, of which some farmers in Sumter county have raised as much as \$300 worth of cane and syrup to the acre. On the bills of fare of many Southern hotels will be found Georgia cane syrup, and the inquirer will be informed that by many people it is regarded as superior to maple syrup. Another use of the cane,





AMERICUS, GA.: REPRESENTATIVE HOMES.

2. Mr. W. C. Carter.  
4. Mr. W. B. Harrold.

1. Mr. Luther Bell.  
3. Mr. G. W. Glover.



which presents a novel sight to the Northern visitor, is made by children chiefly, and consists of peeling the stalk and chewing the pith. For this purpose all the grocery stores in this region will be found to keep a supply of stalks throughout the season. There are no extensive sugar-cane plantations, like those of the Mississippi river bottoms, and none of the syrup is made into sugar, but where a yield of \$300 can be obtained off \$15 an acre land it would seem that its more extensive cultivation is merely a matter of time.

In fruits, and especially peaches, pears and grapes, the soil and climate, as well as the results of efforts heretofore made, justify the expectation that fruit-growing on an extensive scale for the Northern markets will increase in magnitude and importance.

The raising of horses and mules is engaged in to some extent, and conditions and results are such as to encourage more extensive undertakings in this line.

Dairy cattle thrive as well as anywhere, and in time will doubtless contribute an important addition to the products of the county.

The range of prices of Sumter county farms is from \$2 to \$25, but the average prices for such places as would suit the immigrant and homeseeker are from \$7 to \$15.

The character of the soils along the line of the Georgia & Alabama road in Sumter county are red chocolate lands, red clay lands, oak and hickory gray lands, pine gray lands and red lime lands, all good and adapted to peaches, pears, grapes, grain, cotton and grasses.

The first town reached after leaving Webster county is Plains, so named from being situated in a perfectly level tract extending six or seven miles in every direction. Here are again found the strong red chocolate lands, adapted to all farm products and of the same character as the lands around Richland. Cotton is an important item of farm products here,

there being some 6000 bales of cotton marketed at Plains annually.

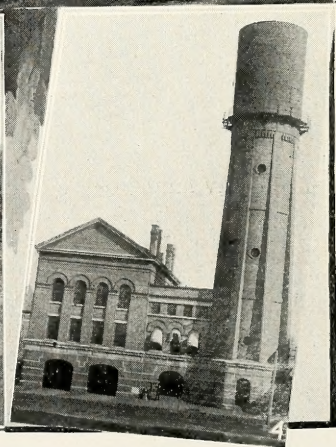
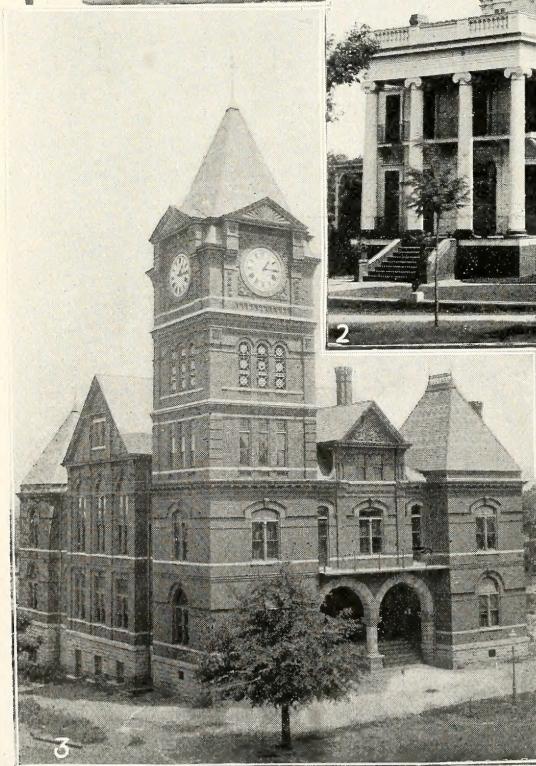
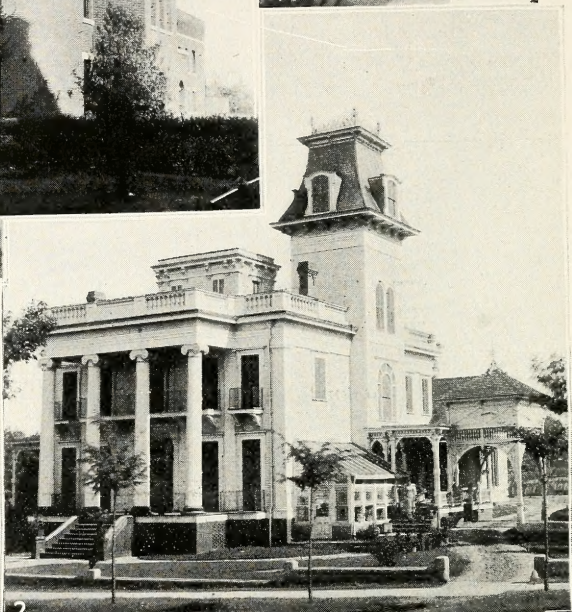
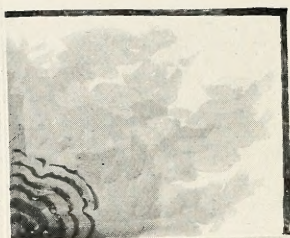
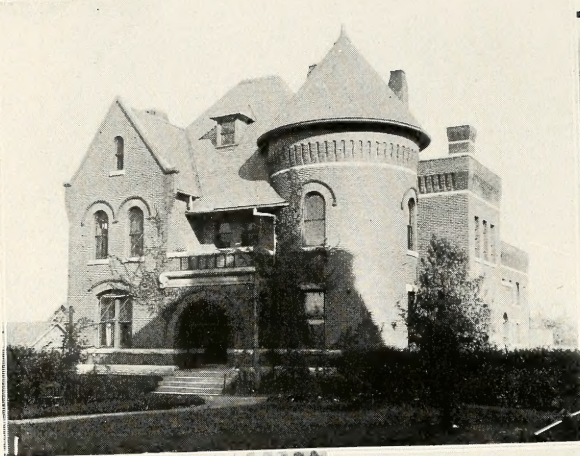
Two miles north of here is situated Magnolia Springs, a famous and still popular health resort, which in antebellum days was an attracting point for the wealth and fashion of a large portion of the South. It is still much frequented on account of the virtues of its waters, and a movement is on foot to put in adequate accommodations for summer visitors.

The next town on the line is Americus, the county-seat of Sumter county, the headquarters of the Georgia & Alabama Railway and the most thriving city of Central Georgia south of Macon. Though laid out in 1832, the principal growth of Americus dates back but a few years, 4000 of its 8000 inhabitants having been gained within the past ten years. It is today a busy and ambitious trading centre, and is developing along lines which promise continued growth. There are marketed in Americus from 30,000 to 35,000 bales of cotton annually, and including those handled by the compresses the total foots up some 60,000 bales annually. There are three wholesale grocery houses, doing a combined business of about \$1,500,000 a year, and covering a territory extending from Americus in various directions thirty to 100 miles. Other mercantile establishments include a large wholesale and retail hardware house and numerous well-equipped retail stores.

Industrial enterprises are represented by a cottonseed-oil mill, fertilizer works, foundry and machine shops, variety works and planing mill, two cotton compresses, ice plant, marble-yard and minor industries. There is no cotton mill there at present, but the abundance of long and short-staple cotton raised in this vicinity suggests the inevitable development of this industry ultimately.

The particularly strong points in favor of Americus are its transportation facilities, its healthfulness, its pleasing physical features and the abundant resources of the country tributary to it.





AMERICUS, GA.:

1. Jail.
2. Typical Old-Time Home, now used as Sanitarium.
3. Courthouse.
4. City Hall and Water Tower.



Americus is the junction point of the Georgia & Alabama and the Central of Georgia Railroad systems. It was the enterprise of Americus citizens that inaugurated the undertaking which has since become the Georgia & Alabama road, and though in the receivership and reorganization which followed a great many of the projectors and promoters lost a good deal of money, it is unquestionably to the building of that road that Americus owes the impetus which has doubled her population. Besides giving the important connections at Montgomery and the ocean outlet at Savannah, the Georgia & Alabama insures competitive freight rates to and from all points.

The Central has two branches at Americus, one line running between Americus and Columbus and the other from Albany to Atlanta via Macon. So Americus is in touch with every railway system in the State.

The conspicuous healthfulness of Americus, as evidenced by mortuary statistics, is due hardly less to natural causes than to the measures adopted by her people to give the city the best sanitation possible. A complete sewerage system was established a number of years ago, and the city is furnished with artesian water of absolute purity. It was of incalculable benefit to the South that the feasibility of artesian wells here was demonstrated. Col. John P. Fort, of Albany, is credited with having been the first to discover that this section may find the purest of water by boring down from 600 to 1000 feet, and this discovery has been utilized to the greatest advantage all over South Georgia. The water supply of Americus, which is distributed from an immense stand-pipe in the centre of the city, has resulted in practically eliminating the fevers which formerly prevailed at certain seasons of the year when water was taken from shallow wells.

A tribute to the healthfulness of Americus and the salubrity of its climate is furnished by the location here of a perfectly-appointed sanitarium,

which especially aims to provide an attractive retreat for patients who desire to escape the discomforts of a more rigorous climate. The winter temperature here is much higher than at Atlanta, for instance, being about similar to that which has made of Thomasville a popular winter resort. Americus was selected by the founder because of its natural healthfulness, excellent sanitary condition, its pure artesian water and convenience of location at the junction of two important railroad systems, which afford direct communication with every section of the country.

The country about Americus is elevated and rolling, and the city itself is built upon a series of undulations or hills. The general elevation is 450 feet above sea level, but there are differences of 100 feet in elevations within the city limits.

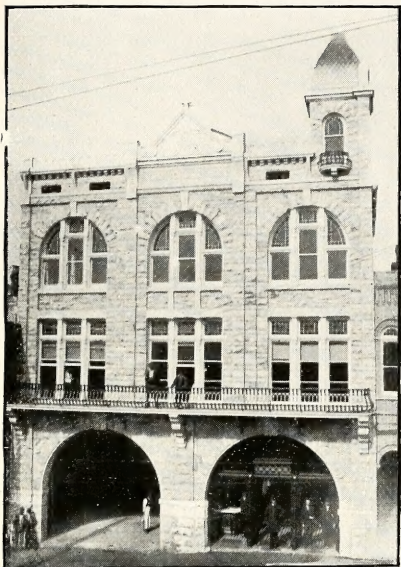
A striking feature of Americus is the number of handsome homes and the beauty of the tree-lined residence streets. These evidences of taste and refinement almost never seen outside of old-established communities at once commend Americus to the favorable consideration of the visitor and the homeseeker. When there shall have been a more general adoption of street paving and sidewalk improvements the conditions will be complete for making Americus one of the most attractive cities of South Georgia.

In its public buildings, too, Americus furnishes a conspicuous example of the improved conditions which have come to the South within the past few years. Surrounding a park square are a number of buildings which would do credit to a place much greater in size than Americus. The imposing Windsor hotel, in a striking variety of Romanesque architecture, marble-tiled and lavishly finished throughout in hard wood, occupies a full half block. This fine hotel, one of the handsomest, architecturally, in the South, was designed by an Atlanta architect, Mr. G. L. Norrman. Across the square, in a row, are the 200-foot water tower, the city hall, the most pictur-



esque and inviting jail an "outsider" ever viewed and the substantial county courthouse, completed not long since at a cost of \$40,000.

Social conditions are all that might



Americus, Ga.: Postoffice in Johnson & Harrold Building.

be expected of a Southern city of sixty years' standing, and furnish a charming addition to the attractions the homeseeker would here find. The denominations are well represented in the numerous churches established here, and the free public school system is entirely adequate and liberally maintained.

Americus has two daily newspapers, morning and evening, creditable to a town of its size and which are alive to the importance of securing immigration. Indeed, it may be said that the spirit of the entire community is distinctly favorable to the work of interesting Northern people in the city and its vicinity, and numerous efforts along this line in the past have been warmly seconded by the press and the people.

Naturally the Georgia & Alabama Railway takes an interest in the progress of Americus. Here are its general offices, and there is now nearing completion here a new and handsome pas-

senger station, such as cannot be found at many places three or four times larger than Americus.

Adjoining Sumter is Dooley, one of the most remarkable counties in the State and a conspicuous illustration of the notable development following the construction of the Georgia & Alabama Railway. Ten years ago there was not a village in the county with over fifty people in it; today it contains fifteen thriving towns, with populations running from 100 to 3500; has at least 25,000 inhabitants in it; has a taxable valuation of over \$3,100,000, with a continued, unbroken increase, even 1896 showing an increase over the previous year of \$182,000. The primary basis for this exceptional development is found in the enormous timber resources of this section. Beginning at the Flint river, on the western limits of Dooley county, and continuing in an unbroken stretch to Meldrim, 148 miles eastward, and extending from an average of twenty miles north of the Georgia & Alabama road to the Gulf coast on the south, there was a long-leaf yellow-pine forest, which, up to a few years ago, had never been cut into. Although much has been done toward developing the great wealth of resources this area contains, it has as yet been hardly more than touched, and is today the



Americus, Ga.: Johnson & Harrold Warehouse and Yard for Cotton Storage.

largest body of standing long-leaf yellow pine in the world.

The lands of this forest, in their adaptability to agricultural purposes,



are a surprise to everyone. They were generally supposed to be absolutely worthless, and have until within recent years sold at fifty cents an acre. It has now been demonstrated that everything that grows in the South will grow to perfection on these lands, and where the saw timber has been cut off and the lands put in cultivation there are today some of the finest farms in the South. These lands are largely settled by native Georgians, who have here grown independent. And yet the whole section was, until the construction of this road, an unbroken, unsettled pine forest.

Outside of their fitness for general agriculture, these lands appear to be peculiarly adapted to fruit-raising, as is shown by the extensive and eminently successful orchards at Tifton, which place, while not on this road, has identically the same character of lands. At Tifton they got at it first, but the same results are expected to follow efforts made elsewhere in the district. Immediately along the railroad the timber, being accessible, was cut first, and in its place are now farms and peach orchards. Along the line many thriving towns have sprung up, there being between Coney and Mel-drim thirty-five towns, all new.

This entire region seems destined to become one vast orchard, the cheapness of the lands and the ease and small expense at which an orchard can be put out being altogether in favor of this section. With the exception of lands near the stations, these lands can be bought for \$3 an acre after the millmen have cut over them. There remains standing there timber it doesn't pay them to cut sufficient to do all fencing and, in some instances, to furnish all buildings. A man with \$500 can go into the country anywhere east of Cordele, get 100 acres of land, fit it for tenancy, and start to farming, and have on hand a debt of not over \$200. And he can arrange the payments on his lands just about to suit his convenience.

Immediately following the construction of the Georgia & Alabama and

other roads through this section the lumber and naval stores industries began to be extensively developed, and now form a very large portion of the business of the roads. On the line of the Georgia & Alabama road alone there are 100 saw mills, big and little, many of which are among the largest in the world, equipped with the best machinery, having electric plants, their own railroads and every facility for the economical manufacture of lumber in its various shapes. These mills have a capacity of about 1,500,000 feet of sawn timber daily, the product of which is shipped to all parts of the globe. The tariffs the Georgia & Alabama road furnishes for transporting the output of these mills cover 6000 points in the West and 8000 in the Middle and Eastern States, and all of these 14,000 points are used; that is, lumber is shipped to everyone of them from one or another of the mills in this list.

There are eighty-one naval store plants along this road, producing annually 600,000 barrels of rosin, 200,000 barrels of spirits of turpentine and large quantities of tar and kindlings in addition.

The naval stores are almost exclusively marketed at Savannah, which has for some years been the leading naval stores market of the world, and its influence in developing the resources of this section, so thoroughly covered by the Georgia & Alabama road and its connections, is a powerful factor in the situation.

What has been accomplished in the long-leaf pine section of South Georgia, largely through the influence of the Georgia & Alabama Railway, is one of the most interesting and important features of Southern development of the past few years. Not only have numerous vast and valuable enterprises been inaugurated, but town-building has followed on an extensive scale, and in no other section have there been more successful efforts made at colonization and immigration movements. The settlement of the Old Soldiers' colony at Fitzgerald is the

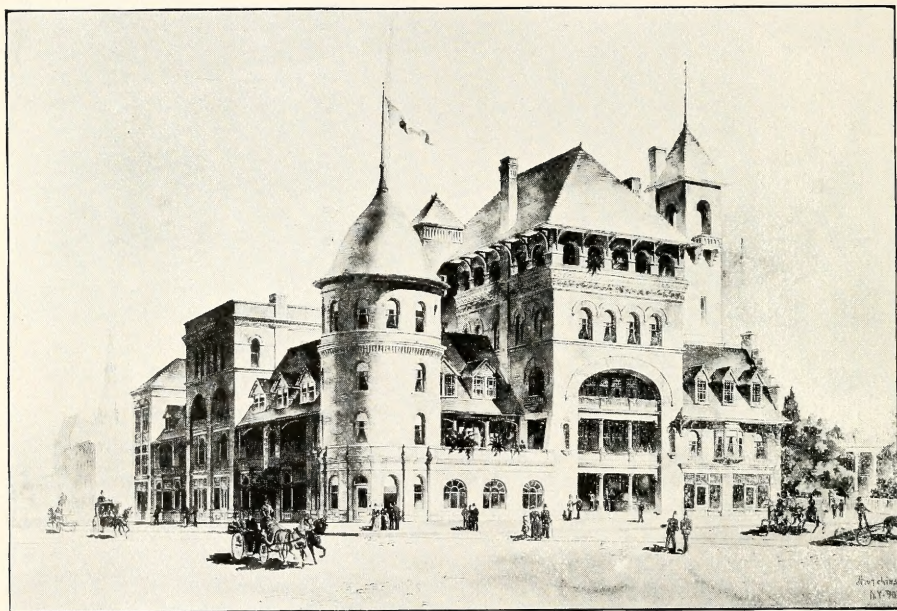


most conspicuous example in this line, but all along the Georgia & Alabama road new towns have sprung up and old ones received a revivifying impulse.

A good illustration of this is furnished in the case of Cordele, in Dooley county. Though not the county-seat, it is the most important point in the county, and is the largest town on the main line of the Georgia & Alabama between Americus and Savannah. Yet eight years ago its site was an old field, which contained only a single house. Today it has

tel, the Suwanee House, would, with its private baths and other comforts, be a credit to a much larger town, and its advantages in every way, commercially, industrially, socially and educationally, are superior to those of most cities of 10,000 inhabitants. This is so conspicuously true as to excite the comment of even the casual observer. "Cordele is a typical illustration of the industrial conditions in what is called the new South," said one visitor recently.

And all this has been accomplished without any land boom. It is simply



Americus, Ga.: Windsor Hotel.

three independent lines of railroad, has sanitary sewerage, water works, electric lights, an independent telephone system, with connections taking in all the towns for twenty miles around and furnishing service at cost; it has a cotton mill with 3600 spindles, foundry and machine shops, cooperage works, fertilizer works, variety works, bottling works, ice factory, planing mills and other smaller industries; it has a large and growing jobbing trade in the grocery line; has ample banking facilities, and is in every respect equipped as an important trade centre. Its chief ho-

tel, the Suwanee House, would, with its private baths and other comforts, be a credit to a much larger town, and its advantages in every way, commercially, industrially, socially and educationally, are superior to those of most cities of 10,000 inhabitants. This is so conspicuously true as to excite the comment of even the casual observer. "Cordele is a typical illustration of the industrial conditions in what is called the new South," said one visitor recently.

And all this has been accomplished without any land boom. It is simply

Cordele's present railroads are the Georgia & Alabama, the Georgia Southern & Florida and the Albany & Northern. The Waycross Air Line



is now building to Cordele, and there are other possibilities. A link of thirty-five miles between Cordele and Hawkinsville would give Augusta an outlet into Southwest Georgia, and an extension of forty-two miles would bring the Atlanta & Florida from Fort Valley and thus give that road the benefit of the connecting lines now entering at Cordele.

The timber and naval stores interests of Dooley county bring a cash trade to Cordele the year round, which is largely responsible for her continued prosperity. The fourteen important mills in the county have a capacity of some 350,000 feet of sawn timber per day, and it is all "bill stuff" for cars, bridges, buildings, etc. They don't cut "stock stuff," as a rule.

In addition to these interests, Cordele is surrounded by a rich agricultural section, producing abundantly corn, long and short-staple cotton, sugar-cane, peas, rye, oats, wheat and hay. According to the last census returns, Dooley county was in corn production second to Sumter only of all the counties in Georgia through which the Georgia & Alabama road runs, her product being 363,880 bushels, and she was third as to cotton, with 15,780 bales. The soil is also excellent for fruits of all kinds, and especially for watermelons and grapes. It is interesting to note that good lands, accessible to railroads, can be bought for from \$3 to \$15 an acre.

People who are looking at Southern places from the standpoint of their desirability for a residence will care to know that Cordele lays claim to exceptional healthfulness on account of its excellent water works and sewerage system and favorable climate conditions. It is stated that in summer the thermometer seldom shows above 90° heat, and that for a winter resort it possesses all the virtues accredited to the favorite spots in the Georgia pine belt.

Being situated in what is called the "rain zone," this section is not afflicted with the long droughts which

are common to many places during the summer months.

Outside of the \$65,000 hotel, the \$22,000 opera-house, numerous churches and excellent schools, there is a moral atmosphere about Cordele which will as strongly commend itself to many homeseekers as will any of these inducements. There has never been any whiskey sold in Cordele, and the people do not desire that it ever shall be sold in the town.

The enterprising character of the people of Cordele is evidenced by three achievements of the past year. First, it has within the year secured competitive freight rates, and enjoys the advantage of being what is termed by the railroads a "basing point" for freight rates, which means that it has the same rates as Americus, Albany and other competitive points. As a result of this achievement Cordele already has four wholesale houses, and others are coming.

The second stride forward this year is one that saves thousands of dollars annually to merchants and property-owners. It is a reduction in fire insurance rates, Cordele now being placed on the second-class basis for insurance rates, jumping at one bound from fourth to second place. This classification speaks for itself, and proclaims the excellence of the city's water works and fire protection.

The third progressive step for the year has been the establishment of a first-class system of free public schools, which are now in successful operation. All these improvements have been made without any increase in the tax rate of the city, which is only 1 per cent., a rather uncommonly low rate for new cities anywhere.

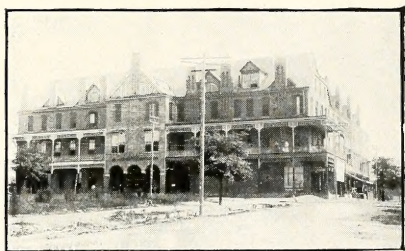
Cordele is a bright, clean town, and its people are enterprising and industrious. With its railroad facilities, its timber and agricultural resources, and its general attractiveness, it seems altogether reasonable to expect a fulfillment of its people's prophesy, that it will control the trade between the Flint and Ocmulgee rivers and will



double its population within the next five years.

After leaving Cordele the next point of more than passing interest is Abbeville, practically at the head of navigation of the Ocmulgee river and the junction point of the Abbeville & Waycross division of the Georgia & Alabama Railroad.

Although Hawkinsville is the actual head of navigation, at some seasons boats run no farther up than Abbeville. This place of some 1500 population is receiving the benefit of immigration, as are other portions of Wilcox county, to which is being attracted a thrifty class of settlers from the West. At the corn and cotton exposition at Fitzgerald in September the exhibit of Wilcox county products was one of the most interesting and instructive of anything there seen. To illustrate the adaptability of lands



Cordele, Ga.: Suwannee Hotel.

hereabout to any crops it may be mentioned that there is within five miles of Abbeville a farmer who is growing rich, devoting himself to the exclusive raising of hay. He puts in from 300 to 500 acres annually, uses the latest improved first-class machinery and sells all he can raise right at home to local trade at about \$15 a ton. He cultivates a mixture of native grass and German millet, which is preferred to timothy.

The fruit industry is already being developed in this section. Three miles from Abbeville is an orchard from which the owner last season netted \$350 on 100 crates of peaches, a conclusive evidence of the excellence of his fruit, the usual price per crate of average Georgia peaches being only about \$1.50.

The hard-wood timber interests of this section are very large. There is standing within a distance of twenty-five miles north and south of Abbeville, in the swamps of the Ocmulgee river, cypress, ash, hickory, white oak, elm, sycamore, sweet gum, etc., worth fully \$3,000,000. The oak and cypress have been cut for years, but the supply is still practically undiminished.

At Abbeville there are two big mills engaged exclusively in the manufacture of shingles and porch columns, which are shipped to all parts of the country.

There is here a first-class brickyard, with a capacity of 40,000 brick a day, which are pronounced as good as any made in the country—so good, indeed, that they have been in demand at long distances from home, they having been used even at Jacksonville in the new government building there. There will hardly be further occasion to ship them away, however, as it is expected that Fitzgerald alone will consume the output for some time to come.

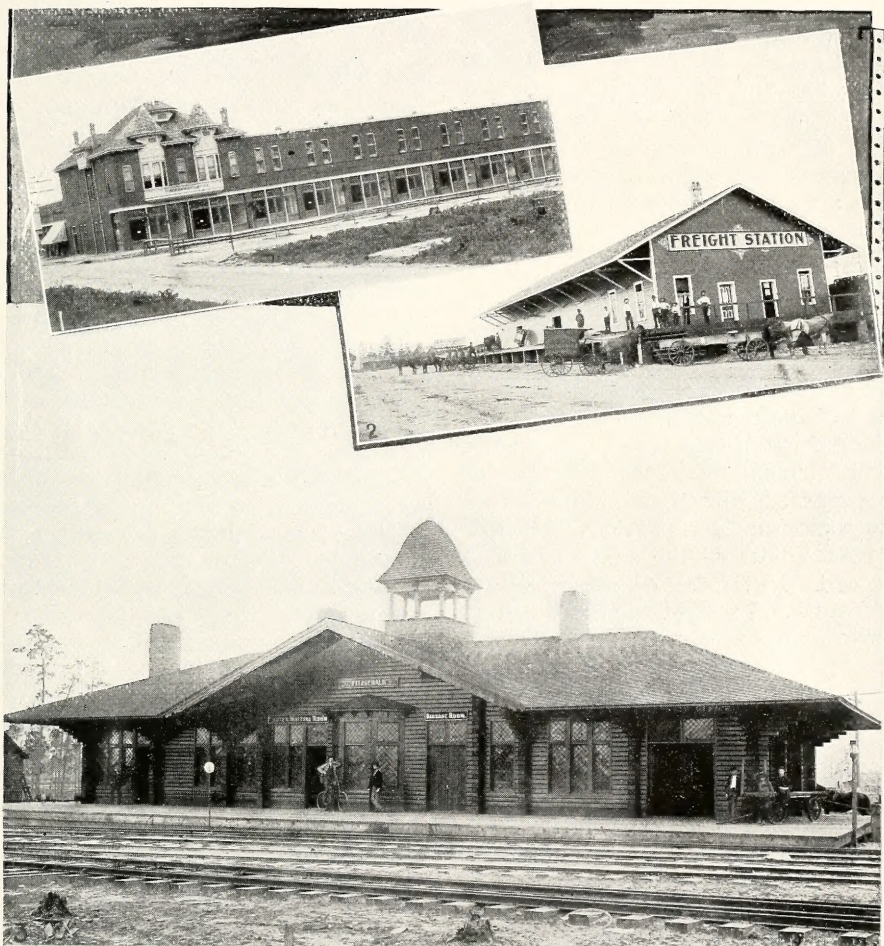
Extending from Abbeville to Fitzgerald, a distance of twenty-two miles, is the Abbeville & Waycross division of the Georgia & Alabama Railroad. This road, prior to its purchase by the Georgia & Alabama, was nothing but a poorly-constructed, indifferently-managed country railroad. The location at Swan of the colony city of Fitzgerald made it necessary for this road to be put in good shape and extended some seven miles to that point. The Georgia & Alabama bought the road January 28 last, and on February 14 ran freight trains into Fitzgerald, and in ninety days from that date had delivered 700 carloads of immigrants' movables, stock, provisions and other freight. A large force was then put to work rebuilding the road. Cuts were set back, fills widened out, right of way cleared back, trestles rebuilt and a telegraph line erected, and today this division is in as good shape as any road in the State. In Fitzgerald the handsomest passenger station in the State was erected, the design of



native pine logs, hewn and polished, being strikingly unique. A freight station and platform, capable of holding 100 carloads of freight, was erected, and a freight-yard laid off that will hold 200 carloads of freight.

A double daily service is operated on this branch, making the service as

most casual reference to the work of Southern development, for nowhere in recent history of migration has a more interesting event occurred than the coming of the veterans of the Northern armies to this section of the far South. Indian reservations suddenly thrown open to white settlement have



FITZGERALD, GA.:

1. Block of Brick Stores.

2. G. & A. Ry. Freight Depot.

3. G. & A. Ry. Passenger Station.

good as that on the main line. Being the shortest and most direct line from all Southern and Western points, it is a favorite route for colonists and their freight destined to Fitzgerald.

About Fitzgerald itself more than a passing word is deserved in even a

shown some unique examples of organized, hereditary land-hunger, but there has been no parallel to this invasion of South Georgia by the members of the old soldiers' colony. When the government offers a body of land to homeseekers nowadays the



event becomes dramatic, because of the ensuing scramble to get the pick of the lands at the price which Uncle Sam, singularly enough, puts upon all his acres, good, bad and indifferent. But here is a case where some 10,000 settlers simply moved in, quietly, unostentatiously, without excitement and with no stronger inducement than the advantages of contiguous lands at a cheap price and in a locality possessing promising agricultural possibilities and with mild and healthful climate. They came by wagon and by train from all over the Middle West and Northwest, and within a year have built a flourishing city in the midst of what was till then an unbroken pine forest.

It is not to be imagined that the colony is composed of war-worn and decrepit old soldiers. It is, on the contrary, a community of active, alert, industrious, energetic citizens from all parts of the country.

There is the element of romance in the settlement of this colony. Its location here is directly attributable to a suggestion of Mr. Richard H. Edmonds, editor of the *Manufacturers' Record*. In the fall of 1894 a failure of crops had brought want and suffering to many farmers of Nebraska and other portions of the Northwest. The South had that year been blessed with an abundant harvest of grain, and to Mr. Edmonds occurred the idea of sending to that drought-stricken section a portion of the bounty which the South so universally enjoyed. The idea was embodied in an interview, which was sent out broadcast by the Associated Press. Following this, Mr. Edmonds appealed to the presidents of Southern railroads, the governors of the Southern States and others in authority. The suggestion was received as an inspiration, and the appeal was immediately and heartily responded to. Governors of Southern States telegraphed their hearty indorsement of the proposition, and railway presidents volunteered their services in collecting and distributing the contributions. The result was that

trainloads of supplies were collected and transported to the needy Northwest, and the eyes of the whole country were opened to the agricultural possibilities of the South. Mr. P. H. Fitzgerald, of Indianapolis, had organized a plan to found a colony of veterans of the Union army, and on seeing this exhibit of Southern resources a locating committee was sent South. After much investigation, it was finally, in the fall of 1895, determined to make a selection of some hundred thousand acres located in the pine forests of Wilcox and Irwin counties, Georgia, and to this wilderness the settlers soon began to wend their way. The plan of the enterprise provided for an allotment to shareholders in the company of town lots and farms of five, ten, twenty and forty acres, and none but stockholders were eligible as original settlers. At the time of selection the company numbered about 50,000 members, scattered all over the North and West, the scheme of the organization providing for benefits, somewhat on the building and loan association plan, not only to intending colonists, but to all shareholders as well. Within the first three months after the site had been selected 1500 people had arrived at the place which became known as Fitzgerald. It was a typical pioneer town, and for some time the inhabitants endured all the hardships and discomforts which attend conditions of primitive civilization. There was no railroad running into the town until several months after the location had been made, and tents and "shacks" furnished all the hospitality enjoyed by visitors and settlers alike. Out of the chaos, however, order was speedily resolved. With the energy of a veritable "boom" town or prosperous mining camp conditions were evolved which transformed the "Shacktown," as it was called, into a habitable city of about 5000 souls. The Georgia & Alabama road came in from the north and the Tifton & Northeastern from the south, and enterprise was the watchword of the hour. Today, after an ex-



istence of practically only a year, there is in the city and on the adjacent lands of the colony a population of some 10,000 people, and accessions are being made continuously. The city has a number of brick business houses, every branch of mercantile enterprise is represented, and a considerable start has been made in the establishment of manufactures. There are thirteen saw mills on the colony grounds cutting timber both for home consumption and for the market. There are four planing mills and two mills which manufacture doors, sash, blinds and general mill work; there are cornice works which compete with the largest firms in their line in the South; there are two ice plants, a cotton gin, two bottling works and a bed-spring factory; a cotton mill to employ 1100 hands is under negotiation, and a canning factory is to be established in the spring. The colony company has spent some \$30,000 for street improvements, grading, etc., has built and equipped two schoolhouses at a cost of \$6000, and is now finishing a four-story hotel, with 128 feet frontage, which will cost when complete about \$35,000. It will be provided with every comfort known to modern hotel existence, and will cater to the tourist business, which annually invades the South. Until the present Georgia legislature convened the city was without a charter, but with incorporation a number of public improvements—artesian water, sewers, street paving, etc.—are expected to be introduced without delay.

The spirit of the people of Fitzgerald was manifested in a striking manner by the inauguration of a corn and cotton exposition during last September. Almost literally an entirely extemporaneous affair, being thrown open to the public within ninety days from the time it was first thought of, it was a remarkable showing for a town of barely nine months' existence, and it is doubtful if, under like circumstances, any such an exposition was ever before seen. The adaptability of the pine forest soil to any kind

of crop was demonstrated in a striking manner by the displays made at this exposition, for it would be impossible to find finer cotton, corn, oats, grasses, cane, fruit and vegetables than were collected here from farms in this immediate vicinity. Although the soil is light and sandy, it responds readily to proper treatment. In this district, an area extending, by the way, from Seville down to the coast, long-staple cotton is produced, and already 50,000 bales are annually shipped over the Georgia & Alabama Railway to Savannah, where it brings from fourteen to sixteen cents per pound.

Truck farming, grain-growing and fruit-raising will all be profitably engaged in, and various lines of manufacturing will be established. There are, as may be expected in this as in all communities, some dissatisfied persons. These come and go, and, going, their places are taken by those who, not looking backward, put their shoulders to the wheel and cast their fortunes with their fellow-workers. The colony is growing continually, and the people are well pleased to have escaped the rigors of a Northern climate, where nine months' work was required to provide the mere necessities of food, clothing and shelter. Thousands of new acquisitions are expected in the city and on the colony farming lands yet unallotted, and the colony company feels certain that before the close of 1897 there will be such an increase in population and such a substantial development of the interests and resources of the community that its establishment on a permanent basis of prosperity will be universally conceded.

This colony enterprise is an exceedingly interesting experiment, and its progress will be watched all over the Union. While it has been the subject of considerable adverse criticism, and some writers have publicly predicted its ultimate failure, there is no doubt whatever in the minds of its friends and of entirely impartial investigators that conditions make possible the most abundant success. While early in the



spring there was a good deal of sickness in the colony, a general clearing up, and the adoption of sanitary reforms, were followed by a degree of health not far behind that of the most favored communities. An artesian well has solved the problem of pure water supply, and soon the city will have a system of water works which will give her permanent immunity from liability to such mild types of sickness as have existed there.

From the records of the health officer and the keeper of mortuary records, the officials of the Georgia & Alabama Railway have compiled the following statement of deaths and causes of death at Fitzgerald during the twelve months ending August 15, 1896, this being the first year of the city's existence: The total number of deaths was 107; the number under ten years of age was thirty-nine, and over fifty years of age, fifteen. The number dying from accidents or from old and incurable diseases was twenty-six; from cholera infantum and child-birth, twelve; from dysentery and malarial causes, twenty, and from other diseases, forty-nine.

Along the eastern section of the line an important element of strength of the Georgia & Alabama road is the volume of business secured from tributary lines, short roads and tramways, which furnish contributions of lumber, naval stores and farm products seeking shipment through Savannah. The change from the conditions which existed in this section a few years ago is really remarkable. There are some thirty towns between Abbeville and Savannah, and all of them are producers of business, so much so that most any day a freight train which leaves Abbeville with ten cars will have grown to sixty by the time it gets to Savannah.

At Pitts, a road comes in from Hawkinsville, bringing valuable consignments of lumber and naval stores. At Collins there is the Stillmore Air Line, reaching the prosperous towns of Still-

more and Swainsboro, and bringing to the Georgia & Alabama the products of one of the best sections of Georgia, a territory which annually produces from 10,000 to 20,000 bales of Sea-Island long-staple cotton. Here also the Collins & Reidsville road makes a contribution of valuable freight destined for the port of Savannah.

At Cuyler, the Cuyler & Woodburn road contributes not only naval stores and lumber, but also hundreds of carloads of watermelons and vegetables consigned to Eastern markets. On this line, though only twelve miles long, there are raised annually 200 carloads of watermelons and large quantities of Irish potatoes, beans and other early vegetables.

A valuable connection is also made at Helena, where the road crosses the line of the Southern Railway, affording communication with Macon, Atlanta and the Northwest, and on the South with the seaport of Brunswick, the South Atlantic coast and Florida points.

Reference has been made to the splendid terminal facilities enjoyed by the Georgia & Alabama at Savannah and its connections with North and South trunk railroads, the ocean steamship lines to Baltimore, Philadelphia, New York and Boston, and the recently-established direct lines to Europe. Savannah, the most important South Atlantic seaport, the foremost market in the world for naval stores, the third largest cotton port and one of the most interesting cities of the South to visitors, has secured an ally in the Georgia & Alabama which will be of immense and increasing value. This splendidly-managed road, with its alert officers and pronounced geographical advantages, will draw new trade from the Northwest, will develop the country through which it runs and will be found a most important factor in swelling the export trade and the commercial importance of the city of Savannah.



## THE REMAKING OF THE SOUTH.\*

*By Henry M. Holladay.*

(Continued from Last Number.)

In reviewing the progress of the South for the past thirty years two important difficulties which she has had to overcome and with which the North and West did not have to contend should be borne in mind. For fifty years abundant capital has poured into the West, and with it or preceding it, what is of far more importance, millions of men—men of bone and brawn, of energy, of skill, of education and of genius. Into the West has gone in large measure the very flower of the manhood of New England and the North. The South has made the fight for life and prosperity with little outside help. Capital long turned from her. Immigrants passed her by. It is still a subject of remark when a man born in the new West rises to distinction. It is equally rare to hear of one in the South who is not a son of the soil.

Another fact is worthy of note in considering Southern progress. The textile industries of New England and the iron industries of Pennsylvania required the fostering care of a high tariff to protect them from European competition. The South has had to meet the competition of New England and Pennsylvania in an open market. In capital, in skilled labor and in experience in manufacturing and trading the disparity was not less between the South and the North than between the latter and Europe. The South has enjoyed no such immunity as that which has placed New England and Pennsylvania among the richest and most populous communities of modern times. But it is no longer denied that the North cannot maintain a mo-

nopoly of the iron and textile industries in America. It is even doubtful whether their supremacy must not pass from them. This is true not because these industries of New England and Pennsylvania are likely to decrease or even cease to grow; but because the natural and healthy development of the South must, at a day which is not far distant, put her upon an equality with New England and Pennsylvania in manufactures of cotton and iron.

This is not a political essay, and we have nothing whatever to do with the bearing of the development of the Southern cotton-textile and iron industries upon the question of a tariff. To the free-trader the facts which are now universally admitted may seem convincing evidence of the truth of his belief. The protectionist may find in them proof that nature, in a fit of unwonted generosity, has lavished bounties upon the South in sun and air and soil and mineral wealth which energy and enterprise are fast converting into a Chinese wall of protection. Whatever theory may best serve the whim of the doctrinaire, the schemes of the politician or the purpose of the practical man of business, the one fact which concerns us here cannot be denied. This broken, conquered, war-swept, poverty-stricken land—this home of "ignorant, brutal and degraded negroes and slothful, effete and degenerate white men"—has for the past thirty years produced cotton in abounding quantity, sufficient to clothe more than half the world and to sustain far from the land where the staple is grown one of the largest manufacturing industries upon

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which modern civilization is dependent. More than this, it has won from the heart and the lips of the most progressive, the most energetic, the most inventive, and, in an industrial sense, the most aggressive community of the nineteenth century a recognition and acknowledgment of the South's capacity to meet any and all competitors in the production of pig iron and the coarser grades of cotton textiles.

The facts which have been briefly and imperfectly set forth in the preceding pages give cause for pride and hope to all patriotic Americans. They show that the growth of the South has been steady and healthy. They afford evidence of a kindly sun and a generous soil, of balmy air and plentiful showers, of vast mineral wealth and of inestimable natural advantages for agricultural and manufacturing industries. They clearly indicate that the South has now reached a stage of development when her people may avail themselves of these advantages and draw freely upon the treasures which nature has provided. But better than this, what has been accomplished shows the awakening of hope, enterprise, emulation and self-confidence in her people. The facts we have noted testify to the sturdy virtues and the true metal of her men. They evidence a willingness to comprehend new conditions, adaptability to meet them and the determination to make the best of them.

In frankness it must be said that they have much to be desired. Although the growth and progress of the South has been great, although the aggregate value of cotton which she has produced in the past thirty years has brought a vast fund of wealth into her borders, the South is still poor. She is far to the rear of the most progressive communities. At best many years must pass before she can hope to rival or even approach them in wealth, in the comforts of life, in educational advantages or in literary, scientific and artistic attainments. Before her are long years of plodding labor, of untiring energy, of systematic effort, of patient self-control, of

infinite self-denial, of prudent forethought, and, above everything else, of small economies and cultivation of habits of thrift.

But without losing sight of the difficulties which lie before her people, of the weaknesses they must conquer, of the sins they must amend, there is still good cause for faith in her future. In her faults she is distinctive, but not peculiar. From sin and from folly no people is exempt. We may trust in the benign effect of natural law upon freemen as they grow in wealth and enjoy better educational advantages.

The best idea of the possibilities of the future for the South may be obtained from a glance at the advantages she enjoys. Without pausing to prove what is self-evident, or to demonstrate what is recognized and acknowledged by the common consent of well-informed men, these may be briefly stated:

1. A mild and equable climate reduces the cost of dwellings, fuel, clothing and food to a minimum; and farming, milling, manufacturing, commerce and other industries are uninterrupted by winter. Thus several months are added to the working year under less trying conditions than in more northern latitudes. For the same reasons the South possesses exceptional advantages for breeding and fattening live stock and for producing milk, butter and cheese.

2. The South produces all the rice grown in this country; 75 per cent. of the tobacco, and 93 per cent. of the sugar. Her capacity to increase her production of these crops is practically unlimited. Mr. J. R. Dodge, the statistician of the Department of Agriculture, in 1891 said: "One-tenth of the area of Florida is fifteen times the entire breadth of the sugar-cane area in the United States in 1880, situated several degrees of latitude south of existing plantations, requiring only a system of drainage to become the best cane lands of the United States."

3. The production of sub-tropical fruits and nuts and the early fruits of the temperate zone are already large industries, and with the growth of the



country and better, quicker and cheaper facilities for transportation must become of great importance.

4. Extending over a wider territory and giving employment to a greater number of laborers is the trucking industry. The fields in which early vegetables and melons are grown for the Northern markets stretch from Chesapeake bay to the Gulf and from the Atlantic to the Mississippi. In thirty years this industry has grown to dimensions which greatly affect commerce and transportation, and its future is limited only by the growth and wealth of more northern States.

5. The South is now richer in timber than any other part of the Union, and a great development in the lumber trade and in manufactures of wood is inevitable.

6. The production of cotton is a source of wealth, the future of which may be judged by the past. It need only be mentioned here.

7. It is now an accepted fact that the South enjoys unrivalled advantages for the cheap manufacture of the coarser grades of cotton textiles. The growth of this industry is, at this time, the most striking feature in the development of the South. Naturally and in due season will follow manufactures of the finer grades of cotton textiles and the growth of kindred industries which group themselves about the parent industry.

8. The growth of the Southern iron industry has been shown in the preceding pages. Its vigor and continued growth are beyond doubt or cavil, and, following the production of pig iron, must come the development of the iron and steel industries in all their varied and manifold forms.

9. The South is known to be rich in many minerals besides iron and coal, such as salt, sulphur, phosphate rock, building stone, clay, manganese and gold, and the industries to which these must give rise will have an important bearing upon her development.

10. The mountain range of the Alleghanies, extending from the Virginias to Alabama, with a vast number

of streams falling from 1000 to 2000 feet from the plateau to tidewater, gives the South water-power widely distributed, easily harnessed and of incalculable value. This one resource, as yet practically untouched, is sufficient to give a development and diversification to the industries of the South which should make her rich.

11. For purposes of navigation and trade the greater portion of the South is a vast peninsula across the neck of which a line may be drawn from Washington to Wheeling. From Chesapeake bay to the mouth of the Mississippi the ocean washes her shores, penetrates far inland with many estuaries, and affords facilities for a vast coast trade. The opening of the Chicago drainage canal will mark a new era in the development of the great central valley of the Union. The Mississippi and its tributaries must in a few years become the greatest of all traffic-bearing waterways. This will bring the South into close business relations with and give her cheap transportation to the best markets of the world. The possibilities of this great enterprise are too vast for more than mention here. The opening of our inland waterways to commerce means much to the whole country, but to no section does it mean so much as to the South.

12. A ship canal uniting the Atlantic and the Pacific is a national necessity. Public opinion is fast crystallizing on the subject and will not brook many years' delay. This canal will put Southern seaports close upon the route of commerce flowing between the Occident and the Orient. It will make the opportunities and the advantages of the South for trade equal to the advantages which she now enjoys for agriculture and for manufacturing.

13. The South is fast becoming the great winter resort for invalids, tourists and men and women of leisure and fashion. A line of luxurious hostels now stretches from Hampton Roads to Punta Gorda in Southern Florida. Winter homes built by Northern people are becoming a feat-



ure of Southern life, and the tide of visitors steadily rises as wealth increases and the conditions of life become easier. Man is growing as migratory as the birds, and follows in their wake when they wing their flight southward at the approach of winter. The money which is thus brought into the South is not to be overlooked, but vastly more important are results less apparent to the casual observer. The better knowledge which the people of the North and the South obtain of one another leads to closer business and social relations and to broader and more liberal ideas upon both sides.

14. In an area so vast as the territory embraced by the Southern States and so sparsely settled, new sources of wealth, as yet unthought of, must inevitably come to light and give rise to new enterprises and new industries. Upon this we may rely as confidently in this age of invention and discovery as upon the assured growth of the cotton crop.

The future growth of the South in wealth and population must have an important meaning to the whole country. But no true idea can be formed of how vitally this subject concerns the nation unless we keep constantly in mind the vastness of the area embraced by the Southern States. This can be appreciated only after a comparison with the territory of other States of the Union and with the great powers of Europe. The thirteen Southern States have an area of 818,065 square miles. The States of Massachusetts, Rhode Island, Connecticut, New Hampshire, Vermont, New York, New Jersey, Pennsylvania, Delaware, Ohio, Indiana, Illinois, Michigan and Wisconsin have an area of 386,690 square miles and a population of 30,000,000. When the population of the South becomes as dense as that of the Northern States which have been named it will have a population equal to the present number of inhabitants of the whole Union.

France covers an area of 204,177 square miles, or about one-fourth as much as the South. Its population is

38,218,903. If the South were as populous it would have more than 150,000,000 inhabitants.

The area of the German Empire is 211,108 square miles, a little more than one-fourth as great as that of the South. Its population is 49,421,064. If the South were as densely settled it would have more than 190,000,000 people.

Austria-Hungary has an area of 201,591 square miles, and its population is 41,827,700. With the same number of people to the square mile the South would have 169,000,000.

The area of the United Kingdom of Great Britain and Ireland is 120,973 square miles, and its population is now more than 38,000,000.\* If the South were as densely settled it would have 256,000,000 inhabitants.

The kingdom of Italy embraces an area of 110,665 square miles, and its population is 29,699,000. If the South had as many people to the square mile its inhabitants would number 219,000,000.

The area of the Netherlands is 12,680 square miles; the population is 4,450,870. If the South were as densely populated it would have 287,000,000 people living within its borders.

Belgium has an area of 11,373 square miles, and its population is 6,030,043. If the South had as many people to the square mile as Belgium its population would be more than 430,000,000.

Now, if we take six of these countries and sum up their aggregate area and population we have the following result:

	Sq. M.	Population.
France .....	204,177	38,218,900
German Empire .....	211,108	49,421,000
Austria-Hungary .....	201,591	41,827,000
United Kingdom .....	120,973	38,000,000
The Netherlands .....	12,680	4,450,000
Belgium .....	11,373	6,030,000
Total .....	761,902	177,946,000

Here we have six countries whose aggregate territory is many thousand square miles less than the area covered by the Southern States, but whose population is 177,000,000.

These countries are divided by laws, by language, by race and by national



rivalry, jealousy and traditional animosity. Most of them are heavily taxed to support vast armies and to pay the interest upon tremendous national debts. They are handicapped by ancient laws, customs and social traditions. But they continue to grow in wealth and population. The condition of their people is steadily rising, and life with them undoubtedly becomes easier instead of harder.

It is inevitable that the South must increase in population and grow in wealth from this time forward as it never grew before. He who questions this must deny that the hand which smote the shackles from the limbs of the slave set free the soul of the master. He must show that there are natural causes which place the South at a disadvantage as compared with the Northern States and with all the countries of Europe, or he must prove that Southern men are inferior to their American and European contemporaries in the nobler attributes of manhood.

The facts and figures which have

been cited in this paper leave no room to question the substantial progress of the South in the development and diversification of its industries under difficult and trying circumstances.

Remembering the difficulties which the South has overcome, and the sufferings it has survived, the outlook today is altogether hopeful. The State governments are in the hands of Southern men. The South has an equal voice with the North and the West in the councils of the nation, and upon it rests an equal responsibility and interest in shaping the destiny of the Union. Its people possess as fair a land as was ever blessed with the benediction of heaven, imperial in domain, unlimited in mineral wealth and unsurpassed in natural advantages. Its young men, reared in the stern school of adversity, have been hardened and strengthened in the sturdy virtues of their race and blood. Year by year they grow in knowledge of the opportunities to which they were born and in faith in the future.





# THE SOUTHERN STATES.

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## THE SOUTHERN STATES.

AN ILLUSTRATED MONTHLY MAGAZINE  
DEVOTED TO THE SOUTH.

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Editor and Manager.

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BALTIMORE, JANUARY, 1897.

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The SOUTHERN STATES is an exponent of the Immigration and Real Estate Interests and general advancement of the South, and a journal of accurate and comprehensive information about Southern resources and progress.

Its purpose is to set forth accurately and conservatively from month to month the reasons why the South is, for the farmer, the settler, the home seeker, the investor, incomparably the most attractive section of this country.

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### Honor to Whom Honor is Due.

The Houston Post recently published the following:

"That man used to be regarded as a valuable citizen and a public benefactor who made two blades of grass grow where but one grew before. Under such a measure of public utility ex-Governor W. J. Northen, of Georgia, is entitled to the distinction of being today the most useful citizen in Georgia, for he is causing more new acres to be cultivated in that State than is caused by any other man there.

"The town of Fitzgerald, containing now some 8000 population, is the result of ex-Governor Northen's enterprise, and the territory around Fitzgerald is being rapidly filled with a hardy and progressive class of immigrants from the North and Northwest. The Savannah News says 150 families are ready to start for Georgia from the country about Duluth, Minn., and that this is only the 'advance guard of a host of immigrants' ex-

pected before the spring. One man has thus been the instrumentality of starting an immigration into Georgia that will be worth millions of money to that State. But the good does not stop there, for the tide started in the Northwest is running strongly toward Alabama and Florida as well as Georgia. Twenty wagon loads of newcomers from Wisconsin located the other day near Huntsville, Ala. Incidents like this are mentioned almost daily in the Post's Southern exchanges."

This was reproduced in the Atlanta Journal, with this comment:

"This is high praise, indeed, but it does not go beyond the deserts of Governor Northen."

In the interest of truth, and in justice to many able and successful immigration workers in the South, the "Southern States" feels constrained to point out some inaccuracies in the foregoing article. We have no desire in the world to detract from the work that ex-Governor Northen has done. He has accomplished large results, and not only the State of Georgia, but the whole South, will be benefited by his immigration and colonization undertakings. But it is not a fact, as would be inferred from the article we have quoted, that the tide of immigration now "running strongly toward Alabama and Florida, as well as Georgia," is an outcome of the Fitzgerald colony, or of any work ex-Governor Northen has done, or that the flow of immigration into Georgia was started through this instrumentality. This "tide" was "running strongly towards Alabama and Florida, as well as Georgia" and other Southern States, long before ex-Governor Northen entered upon his immigration work. For several years before he had undertaken such an enterprise, Major W. L. Glessner, as commissioner of immigration of the Georgia



Southern & Florida, under the progressive management of Mr. W. L. Sparks, had been engaged in vigorous, aggressive and successful immigration effort, and hundreds of thrifty and industrious families from the North were settled upon thousands of acres in what had been largely an undeveloped wilderness.

The 150 families referred to as starting from Duluth for Georgia were specifically stated in the dispatches to be part of a colony to be settled at Sibley, Ga. This is a station on the Georgia Southern & Florida Railroad. The formation of this colony is a result of Major Glessner's work, and had no relation whatever to the Fitzgerald colony, or to the work of its projectors.

In other Southern States the flow of immigration was well advanced, and was increasing rapidly in volume before ex-Governor Northen had even entered upon his term of office as governor, which preceded the initiation of his immigration undertakings. Through the efforts of Mr. E. E. Posey, general passenger agent of the Mobile & Ohio, and Mr. Henry Fonde, of Mobile, president of the Alabama Land Co., many hundreds of Northern families had been settled in Alabama and Mississippi along the line of the Mobile & Ohio. The Illinois Central road, through E. P. Skene, land commissioner; J. F. Merry, passenger agent, and other officials, had populated with Northern farmers vast areas of unoccupied lands and built up thriving towns and communities in Mississippi and Louisiana, made up wholly of Northern settlers. W. W. Duson & Bro., of Crowley, La., had been instrumental in procuring the settlement in Southwest Louisiana of hundreds, perhaps thousands, of immigrants from Iowa, Minnesota, Michigan, Wisconsin and other Western and Northwestern States. Col. J. B. Killebrew, immigration commissioner of the Nashville, Chattanooga & St. Louis Railway, had been conspicuously successful

in bringing about the settlement of Northern farmers in Tennessee and Northern Alabama. The State of Arkansas had received many thousands of agricultural immigrants through the work of the State land commissioner, Hon. W. G. Vincenheller and the railroads that traverse the State, notably the St. Louis Southwestern, the St. Louis & Iron Mountain and the Missouri Pacific.

And besides these particularly notable examples, we might name dozens of minor instrumentalities that had been doing effective immigration work in Georgia and all the Southern States long before ex-Governor Northen's agency had any existence.

We repeat that we have no purpose to belittle the great work the ex-Governor of Georgia is doing. On the contrary, we should contradict any statement unfair to him as readily as we have sought in this instance to correct an unfair impression as to those who were in advance of him in successful immigration work, and who, along with him, are peopling the untilled acres of the South with thrifty and successful farmers from the North. What they are accomplishing in this direction is not at all a result of anything he has done; rather might it be said that the pioneer work they have been doing has made easier the accomplishment of what he has been able to do. We are quite sure that none will be more ready to acknowledge the justice of all we have said than ex-Governor Northen himself.

#### **Real Estate the Best Investment.**

We publish elsewhere an interesting and significant article from the London Agricultural Gazette. The belief of the English "millionaire financier" that land is a far safer investment than shares in companies at the mercy of directors and subject to accidents of good or bad trade has striking enforcement in a recent utterance of an American millionaire financier. This gentleman, a resident of Baltimore, for many



years a large investor in railroad and other securities, at one time associated with the active management of one of the largest railroad systems in the country, and owner of stocks and bonds to the value of many hundreds of thousands of dollars, said not long ago that in future he would buy no stocks of any sort, but would make all his investments in real estate.

And where else on the globe can there be found such opportunities for real-estate investment as in the Southern States? With its supreme advantages for manufacturing, for agriculture, for health, and its wealth in all that goes to make life worth living, and with its rapid increase in factories and in agricultural population, it is safe to say that its farm, timber and mineral lands will never in the future sell for prices as low as they may be bought for now. This is particularly true of large undeveloped areas, which may be bought now at almost nominal prices, but which, with continued railroad expansion, will bring fortunes to those who may be fortunate enough and far-seeing enough to capture them now.

### **Benefits of Agricultural Immigration.**

Unquestionably the greatest need of the South today is immigration—thrifty, industrious agriculturists. The benefits of such immigration are difficult to enumerate, so thoroughly do they permeate the well-being of the entire community and section. When it is pointed out that increased population means greater wealth, and a consequent decrease in the individual burden of taxation, an important benefit is stated, and one which of itself is sufficient incentive to the South to work for desirable immigration; but that is merely one of many almost equally important. Who can calculate the benefits that would come to the whole na-

tion if the present population of the South were doubled, were augmented by thrifty agriculturists to the number of the people now in the South? And yet the population of the South would not then be nearly so dense as that of Massachusetts—would still lack some 200 persons to the square mile of being so thickly populated as is the not conspicuously fertile Bay State. That the South, with its unparalleled variety of soil, climate and resources, could easily support a population ten times its present density no well-informed man is likely to question; so that it should be a matter of comparatively easy achievement to secure double the present population.

More people would mean more and better schools, more good roads and every other comfort and convenience of modern civilization. It would mean more development of the unmeasured resources of the South, a reduction in the cost of many of the articles necessary to life and to commerce, and by enriching the South would add to the riches and prosperity of the nation. Much less than double the present population, if they were of the right sort, would mean an increase in the value of Southern property amounting to at least double the present valuation. It would mean more and larger cities, more and greater manufacturing centres and more importance in the industrial and commercial world.

The incentive is so strong, the benefits so well-nigh illimitable, that it would seem the whole South, as if one man, would make it the particular and unceasing business of life to seek to fill up the waste places, to tenant the tenantless farm lands, and to thus bring an era of prosperity greater than that ever heretofore enjoyed by any nation of the earth.



# GENERAL NOTES.

## **A Northern Capitalist Revises His Opinions of the South After Investigation.**

Mr. J. K. Ridgely, passenger agent of the Louisville & Nashville Railroad at Chicago, recently induced Mr. Davitt D. Chidester, a capitalist of New Waterford, Ohio, to go South on a trip of investigation. After he had gotten back he wrote to Mr. Ridgely about his trip, and his letter is given below. It is valuable testimony, because of the fact that the writer of it is a man of means and influence and is a large owner of farm lands in the West:

"New Waterford, Ohio, Nov. 30, 1896.

"J. K. Ridgely, Passenger Agent

L. & N. R. R., Chicago, Ill.:

"My Dear Sir—In accordance with my promise, I write you briefly my impressions of the South.

"I was much pleased with what I saw in the section of the South visited, and confess to have been greatly surprised and agreeably so by the wealth of resources it seems to have in the way of soil, climate, minerals, timber, etc. It impressed me as being a vast but undeveloped empire, needing only Northern thrift and energy to promote it into the most productive and the wealthiest section of the whole country.

"I confess also to have gone there with a great deal of prejudice. I think that, in common with most Northern men, I had the idea that the 'South' was a land of dark and dismal forests of cypress and malarious rice swamps and canebrakes; a land of torrid summers and malarial wet seasons.

"On the contrary, so far as I could learn by careful investigation and inquiry of both the natives and of Northern men who have been living in the South for years, I find the climate of that part of Alabama, Mississippi and Georgia which I visited to be exceedingly healthful, in fact unsurpassed by any part of the North. While their summers are long, they are never so hot as we have them in the North, nor are they subject to

the sudden changes in temperature which we have in the North.

"I think it is only a question of making the great advantages of this section of the United States known to the Northern people to have a great tide of immigration set in, for certainly it has every advantage over the Northwest in every way. The farmer there does not have to work eighteen hours a day during the summer in order to get enough to keep himself in food and clothing and to keep warm and to feed his stock during the winter, as they do in the Western and Northwestern States. He can live twice as well with half the work, if all I heard and saw is true. He runs no risk of droughts or of blizzards, which are practically unknown in the South. When I am again in your city I may call and talk with you personally about the South. Meanwhile, I am, yours very truly,

"DAVITT D. CHIDESTER."

## **From Ohio to Georgia.**

Mr. G. W. Shults, recently of Ohio, writes to the "Southern States" from Glenmore, Ga.:

"We left Columbus, Ohio, a few days ago in bitter cold weather. Arriving here, we found the weather perfectly delightful. The gardens are about as they are in Ohio in May and June. Strawberries are in bloom, new potatoes about the size of walnuts. I cannot understand why so many people will stay in the North and freeze to death and raise, or attempt to raise, but one crop a year, when down in this country they can have some crop maturing every month in the year and realize a better price, with much less labor."

The rapid rise of the pineapple industry in Florida since the freeze is shown by a report of Capt. W. J. Jarvis, general freight agent of the Florida East Coast Railway, as to the number of crates of pineapples hauled



over his road in the last three seasons. In 1894 there were 35,931 crates; in 1895, as a result of the freeze, the number was reduced to 4127 crates, but in 1896 the shipments reached 43,012 crates.

### **The Georgia & Alabama.**

At the annual meeting of the Georgia & Alabama Railway Co., held December 16 at Americus, Ga., the following gentlemen were elected directors: John Skelton Williams, of Richmond; J. Willcox Brown, J. W. Middendorf and R. B. Sperry, of Baltimore; W. F. Cochran, Ernest Thallman and C. Sydney Shepard, of New York; John D. Stetson, of Macon; S. A. Carter, of Columbus; W. W. Williamson, John Flannery, C. D. Baldwin and W. W. McKall, of Savannah; Cecil Gabbett and J. W. Sheffield, of Americus.

The new board of directors immediately organized and elected the following officers:

John Skelton Williams, president; Cecil Gabbett, first vice-president and general manager; John W. Middendorf, second vice-president; J. Willcox Brown, treasurer; W. W. McKall, secretary.

The Columbus Southern Railroad was recently bought for the Georgia & Alabama and will be operated as a part of that system after January 1.

### **A New Yorker Buys a Fine Farm in Virginia.**

Mr. A. L. Washburne, of New York, has bought, through the Southern Farm Agency, of Lynchburg, Va., the fine estate known as "Homewood," on Hog Island in the James river. It contains 3200 acres of land, with fine buildings and extensive farming equipment. The price paid is said to have been \$180,000.

It has been said the purchaser will further improve the estate, and will bring down to it from New York specialists in gardening, dairying, butter-making, horticulture and general farming.

### **South Georgia's Winter Products.**

Here the seasons are all blended into each other, and butterflies and bees sip honey from the flowers which never fade from frost and cold. During last week snap beans, radishes and other vegetables of the kind were served from gardens here on the

dinner tables of our citizens. Yesterday the Times had an invitation to a watermelon cutting which is to take place at a country home near Valdosta on Christmas day. All over this section there is room for frugal citizens, and in no section of the country are there brighter prospects for the future or better surroundings for the present. Come South, young man, if you really want to see the garden spot of the world.—Valdosta, Ga., Times.

### **Artesian Water in the South.**

The city of Augusta, Ga., is discussing plans for increasing its water supply. A writer in the Chronicle advocates the boring of artesian wells, and in support of his suggestion he writes as follows about the improved healthfulness of communities that have adopted artesian water:

"I have this much to say for the artesian wells, it has been proven to be the healthiest and largest and most inexhaustible supply of fresh water that a city like Augusta or Memphis, or Thomasville or Savannah and innumerable small places can obtain.

"Look what it has done for the lower counties, Florida, Georgia, Tennessee. Why, in certain sections of these States it used to be impossible for a white man to live in them on account of the malaria. Now, these wells, giving health, life and vigor wherever the water is used, have caused the waste places to be populated with a people whose energy equals those of our Northern States, and, in fact, hundreds of these people have moved down in Florida and around Thomasville, Ga., and make it their homes the year round, and land that could have been bought for a song a few years ago cannot now be had at twice the price.

"Take our own suburbs and outskirts, the Hickman and Phinizy farms. White men who would dare spend the nights on these farms a few years back during the warm months simply took their lives in their own hands. Now since they have gotten artesian water they live there the whole year round with their children, and malarial fevers are almost a stranger to them.

"From Savannah to Tennille, on the Central Railroad, malaria used to be so thick and deadly that there was little or no white



population. Now look at the population of the towns and the fame of their wells. Water is being hauled from Millen every day for drinking purposes in Augusta. So much might be said for the health-giving qualities of this water that it would weary the reader and I will desist. I only ask the people to consider for a moment the inestimable good it would do us to be supplied with this water."

### Another Georgia Colony.

A co-operative colony has been started in Muscogee county, Georgia, near Columbus. The colony is said to number between 300 and 400 members, and about fifty have already settled on the colony property. The colony calls itself "The Christian Commonwealth," and the town to be started as a centre will be named Commonwealth. The Central of Georgia Railway has established a station for the colony with that name.

The managers are Rev. Ralph Albertson, a Congregational minister, and Mr. W. C. Damon. The leaders in the movement are George Howard Gibson, Lincoln, Neb., and John Chipman, Tallahassee, Fla. Mr. Chipman writes the "Southern States" as follows in regard to the enterprise:

"The 'Christian Commonwealth' has purchased about 1000 acres of land at Wimberly Station, on the Georgia Central Railroad, about ten miles northeast of Columbus, Ga., and near Midland, their present postoffice, on the Southern Railroad between Atlanta and Columbus. They have on the ground between forty and fifty colonists, and more are constantly arriving. They expect to erect saw mill, planer and woodworking machinery very soon, and a canning factory in the spring for the summer's work, and such other machinery as they can make use of—grist mill, gin, etc.

"Their plan is to be self-sustaining and mutually helpful. They hold their property in common, and are strictly co-operative.

"They are a religious society, but are not a 'new church.' Members from every denomination are welcomed, and are not required to sever themselves from their communion. But the basis of the 'Christian Commonwealth' is mutual helpfulness and

work, consecrated to the redemption of the workers of the world from industrial slavery."

### Cuban Tobacco in Florida.

A correspondent at Fort Meade, Fla., sends the "Southern States" the following interesting account of the successful attempt to grow the best Cuban tobacco in that locality:

"Fort Meade is situated in Polk county, Florida, about half-way down the peninsula and almost equidistant between the Gulf of Mexico and the Atlantic ocean. It is a small town of 500 inhabitants on the Plant System of railroads, and was formerly a post of some importance to the United States forces engaged in the war with the Seminole Indians. Peace creek runs through the town, and it was on the banks of this stream that General Meade, from whom the place takes its name, signed the treaty of peace that ended the desultory war that had been carried on with the Seminoles for some years. Later it became a large orange and phosphate-shipping and cattle-trading centre, but the freeze of two years ago, added to the prevalent hard times of the last three years, deprived it of much of its prosperity. The present rebellion in Cuba has driven from its shores the men who have been the mainstay of that Island, the tobacco-growers of the far-famed Vuelta-Abajo district of Cuba. These men, cut off from their homes, plantations and the industry in which they have been engaged for years, and in the evening of their lives forced to emigrate to a foreign country, and left nearly penniless, naturally turn their thoughts and energies towards the introduction of the tobacco industry into the United States. They find, on landing in Florida, a climate and soil more similar to that of their beloved Cuba than anything they had imagined. A number of them, after carefully prospecting the State of Florida, have settled on the district in and around Fort Meade, in Polk county, as being suitable to the culture of the highest grade of Cuban tobacco. In January, 1896, they made arrangements with residents for the lease of lands, with option of purchase. Besides, they were donated several hundred acres of valuable property in the county. The men were put to work planting the im-



ported Vuelta-Abajo tobacco seed, and in the month of April about five acres of land in the centre of the town were planted out with this famous crop. Owing to the lack of irrigation facilities and the serious drought through April, May and part of June, the Cubans did not realize as much tobacco as they had hoped for. About fifteen bales, however, rewarded their efforts, and this has been pronounced by every expert who has examined it equal to the finest growth of the Vuelta-Abajo district, of Cuba, and the company has already refused the offer of \$1.50 per pound for the output. Enlarging its operations, the company commenced to irrigate about thirty-five acres of land, and purchased a boiler, engine, mains, pipes, fittings, etc., necessary, besides erecting a large tank. They obtain their water supply from the river, so that this is practically inexhaustible, and pump into a 6500-gallon tank, from whence it is distributed, as well as by direct pressure, over thirty-five acres. They have also erected four large pole-curing houses and one large final curing house, all of them substantial wooden buildings, built especially for the curing and handling of tobacco. The spraying apparatus used for irrigation is probably the only one of its kind in use on any tobacco plantation in the world. It has given excellent results, as it thoroughly soaks the ground and wets the plants, besides cooling off the atmosphere immediately over the crop. The writer has traveled in a number of countries and seen many crops of different varieties growing, but he has never yet seen any thing that can compare in beauty with a field of Vuelta-Abajo tobacco just before it is ready to cut. The company and some of the farmers have already cut several hundred poles of tobacco, and the results are most gratifying, owing to the large percentage of wrapper they contain. It is estimated that about 50 per cent. of the tobacco will be classed as wrappers and the other 50 per cent. as fillers. I understand that in Cuba if one-third of the crop is classed as wrappers they consider that they are doing well. Another point in favor of Florida is that the tobacco suffers far less from the attacks of worms and insects than that of Cuba, and one can easily see the great saving in labor, not to speak of the superior quality of tobacco, caused by this fact.

"It is the opinion of the company's officers that at least 40,000 pounds of tobacco will be realized from this season's crop, which, at the conservative average price of \$1 per pound, will give a very handsome return to the growers.

"One of the greatest advantages that Florida possesses over Cuba is that she can put her crop on the great American market free of all government dues, which, in the case of imported tobacco, amounts to \$2 per pound on wrappers and thirty-five cents per pound on fillers. It has also been demonstrated that two crops of tobacco, one in the spring and one in the fall, can be grown successfully with irrigation, whereas in Cuba only one crop in the year is attempted. There is no doubt in my mind that the average farmer with some capital can now come to Florida and engage in an industry that is at present only in its infancy, with satisfaction to himself and his pocketbook. It is a business that takes more patient care and exercise of forethought than the average farmers' or fruit-growers' life, but it will certainly handsomely repay the extra care and attention required, and is in itself a fascinating pursuit.

"The climate of this locality all the year round is second to none in the world, and living is cheap, added to which there is fair shooting and fishing to be obtained. Land can be bought at reasonable prices at present, and lumber for fencing and building is cheap and easily procured."

### **New State Capitol for Mississippi.**

A commission appointed by the legislature of Mississippi to consider plans for a new State capitol has selected from designs submitted by leading architects in all parts of the country, one prepared by a Memphis (Tenn.) firm of architects, and will recommend to the legislature the erection of a building to cost \$750,000.

### **Florida's Resources.**

A correspondent writing from White City, in Brevard county, Florida, gives the following list of local products that were served at one Christmas dinner in that town: "Turkey, Irish and sweet potatoes, bananas, pineapples, figs, guavas, oranges, lemons, strawberries, tomatoes, peanuts,



cucumbers, honey, fresh beans, pork, green peas, rice, butter, lettuce, quail, venison and watermelon. All the above, he adds, excepting the oranges and lemons, were grown on land that two years ago was an uninhabited wilderness."

### Italian Colonization in Arkansas.

In the "Southern States" for December, 1895, there was a description of a colony of Italians that Mr. Austin Corbin, of New York, had just established in Arkansas. The colonists have prospered, and their number has now been increased by the addition of about 300 new immigrants, who reached New York the last of December and were carried at once to Arkansas. Each adult in the party had a collection of seeds, vines, shrubs, roots and a stock of agricultural implements.

### Southern Pines.

Not long ago there assembled at Southern Pines, N. C., a "Northern Settlers' Convention," composed of Northern persons who had settled in the South. More recently (December, 1896,) there was held a "Southern Wanderers' Convention," at which were gathered a large number of those who, in times past, when the movement was away from the South, had gone out to other parts of the country.

Both conventions originated with Mr. John T. Patrick, who may be called the father of Southern Pines, and who initiated the development that is making this one of the most noted health-resorts and fruit-growing localities in the country.

The readers of the "Southern States" are familiar with the history of Southern Pines, but the following account will be read with interest for the reason that it is from a prominent Northern paper, the Philadelphia Daily Record:

"The gathering of Southern Wanderers at this place during the last few days has helped to call special attention to a section which, probably more than any other in the South, is showing the wonderful effects of the introduction of Northern capital, brains and energy. What was ten years ago regarded as a barren waste of sand and pines and of no practical value to anybody, is today being rapidly developed into one of the richest and most valuable sections of the South,

while two typical Northern towns, within a few miles of each other and connected by a trolley line, are steadily branching out and promise in a short time to become not merely famous health resorts, but also important business centres.

"While the enterprise may be said to be almost entirely Northern in its character, the credit for its commencement belongs to a native North Carolinian, John T. Patrick, who, while Immigration Commissioner of the State, discovered the health-giving qualities of the pine-clad sand hills and began the development of this place purely on those lines. Northern people suffering with throat and lung trouble, after searching in vain for relief in other sections, came here and in the shadows of the giant, big-leaved pines began to regain health and strength. Among the first to come was Capt. Alexander M. Clark, of Philadelphia, a veteran of the war, whose wife was so weak when he arrived that he had to carry her from the train. Today she can enjoy a 15 or 20-mile horseback ride through the pines.

"Hotels and cottages were built, and the town steadily received additions from the North. Many came as permanent residents, while the Piney Woods Inn, a spacious modern hotel on a bold elevation, and a number of other hotels furnished excellent accommodations at moderate rates for guests who come here to escape the rigors of the Northern winters.

"After a practical test of the life-giving atmosphere of this section, J. W. Tufts, a Boston millionaire, eighteen months ago began the most extensive improvement yet undertaken. Purchasing several thousand acres of what was then nothing but sand hills and pine forest, he laid out Pinehurst, a modern town on the most attractive lines, with the old New England village green in the centre. Two handsome hotels have been erected and are in full operation, while all about are cozy and ornamental cottages. A casino combines the function of a ladies' and gentlemen's clubhouse, an up-to-date cafe in connection with it supplying meals to such cottagers as do not want to bother with cooking. A thorough sewerage system has been constructed, while all the houses are supplied with excellent spring water from a central water works. The town is about six miles from Southern



Pines, with which it is connected with a trolley road.

"Although intended originally solely as a health resort, the new Northern residents speedily found methods of also adding to the wealth of the place. The sand hills, which were thought to be of no use for agricultural purposes, were found to be exceptionally well adapted to the growth of peach and pear trees and grape vines. Immense tracts were planted, and midway between Southern Pines and Pinehurst are now flourishing peach orchards, one of them being the largest in the country. The fruit ripens early, and always finds a ready market at good prices.

"The Niagara grapes, grown on the same sandy soil, are in demand all through the North, while some of the best blackberries and strawberries found in the Northern markets are grown here.

"The best evidence of the progress in this section is found in the official statistics of Moore county. Ten years ago it was the poorest county in the State; today it is one of the richest; ten years ago it had the smallest railroad mileage in the State; today it has the largest. It also has more miles of railroads owned by individuals than any county in the United States.

"The Seaboard Air Line Railroad has also aided materially in developing the section by its excellent accommodations, both in the way of passenger travel and freight business. The company is now arranging to locate experimental agricultural stations at regular intervals along its line to give practical tests as to the crops best adapted to the soil. The advent of the railroad, with its numerous branches, has also made available the great pines which furnish the finest pine lumber in the country. The main line of the road runs from Portsmouth, Va., to Atlanta, with northern connections by the Bay Line steamers to Baltimore or all rail from Weldon by way of Richmond and Washington.

"With its health-giving qualities and agricultural possibilities, Southern Pines is admirably located on the Seaboard Air Line, within easy access from both north and south. About seventy miles southwest of Raleigh, the capital of the State, it is 120 miles in a direct line from the seashore and 600 feet above the sea-level. All moisture is quickly absorbed by the sands, and the

air is dry and healthful at all times and always free from the wintry blasts of the more northern cities. The Northern Settlers, composed of people from the North now resident in the South, will meet here annually in May; while the Southern Wanderers, who have gone to other States, will return every year to meet here during the week before Christmas. As the advantages of the place become more generally known it is thought that many other annual gatherings will be held here."

### **The Proposed Beet Sugar Colony in South Carolina.**

Mention has been made heretofore of the fact that Mr. Julius Hartman, of Atlanta, was seeking to establish a colony of Germans in South Carolina, whose chief pursuit would be the growing of sugar beets for a sugar-beet factory to be erected. Mr. Hartman has recently returned from a visit to Saxony, Germany, where he went in the interest of his enterprise. The "Hartman Colony Co." has been incorporated in South Carolina, and has bought, it is said, 18,000 acres of land in Abbeville county, in that State.

Mr. Wm. P. Calhoun, of Atlanta, who sold the land to the company, says in a letter to the "Southern States:"

"I am not a member of the company. I simply secured the lands and sold them to the company. The company fully expects to settle up the whole 18,000 acres within the next two years. The enterprise will open up to this locality an entirely new industry—the raising of sugar beets and the manufacture of beet sugar. The sugar factory will not be erected immediately, but as soon as needed."

### **Scandinavians in Texas.**

The Waco (Texas) correspondent of the Dallas News writes to that paper that recently three families of Danes settled in Bosque county. They left Denmark five years ago, and traveled for a while along the Northern Pacific, visiting relatives settled in the Northwestern States and in British America. After looking over the prairies and forests of Minnesota and North Dakota they came to Texas, where some of their friends reside, and being pleased with the soil and climate they purchased homes and have written to relatives in the old



country that Texas offers the best inducements to Danes. "In Sweden, Norway and Denmark the people are taught to believe Texas is a wild region plagued with savages and lawless white people and subject to long droughts, which bring on famine. There is a colony of Scandinavians in Bosque county in thrifty condition. Some of them have been in Texas for twenty years. Several of them intend going home to spend Christmas, and they will do all they can to correct errors regarding this State. We Scandinavians can stand cold, but it is not necessarily best for us. The blizzard which swept over the Northern States this week froze Scandinavians to death, as well as the natives. Our people would, as a general thing, prefer a less rigorous climate, and in Texas they get just what they want."

#### **Some Recent Publications of the United States Department of Agriculture.**

In *Irrigation in Humid Climates*, by F. H. King, professor of agricultural physics, College of Agriculture, University of Wisconsin, and physicist of the Wisconsin Agricultural Experiment Station (*Farmers' Bulletin* No. 46), which has just been issued by the department, the author discusses the advantages of an abundant supply of soil moisture, the rainfall of the growing season in the United States, water only one of the necessary plant foods, the advantages and disadvantages of irrigation in humid climates, extent of irrigation in the humid parts of Europe, the rainfall of Europe and the Eastern United States, the character and antiquity of European irrigation, fertilizing value of irrigation waters, lines along which irrigation should first develop, lands best suited to irrigation in humid climates, waters best suited to irrigation, amount of water needed for irrigation, methods of obtaining water for irrigation, the construction of reservoirs, and the methods of applying irrigation.

Copies of this bulletin can be secured free of charge from the Department of Agriculture or members of Congress.

In the bulletin entitled "*Some Insects Injurious to Stored Grain*," by F. H. Chittenden, assistant Entomologist (*Farmers' Bulletin* No. 45), the department has provided a popular account of some of the pests which destroy large amounts of valuable

farm products, with suggestions as to the best means of preventing their access to granaries, mills, etc., and of destroying those which have already found shelter within the grain, flour or meal.

This bulletin can be secured by addressing a request for it to the Secretary of Agriculture, Washington, D. C., or to a member of Congress.

The demand during the past two years for information regarding the best practices for the successful growth of hemp and jute has caused the department to issue "A Report on the Culture of Hemp and Jute in the United States, with statements concerning the practice employed in foreign countries, the preparation of the fibre for market, and remarks on the machine question," by Chas. Richards Dodge, special agent. (*Report* No. 8, *Fibre Investigations*, pp. 43 Pls. III, figs. 4).

The bulletin treats of the history of hemp and the range of its culture, statistics and production in the United States, soil selection, fertility and preparation, the necessity for good seed, harvesting and retting the crop, extracting the fibre, recent experiments in California and the South, and the uses to which the fibre is put.

The second part of the bulletin gives a history of the jute industry and discusses the different kinds of jute, the fibre and its uses, culture in India and the United States, the extraction of the fibre as practiced in each country, and the value of the crop.

The bulletin is not for general free distribution, but can be secured for ten cents from the superintendent of documents, Union Building, Washington, D. C.

"*Insects Affecting Domestic Animals*: An account of the species of importance in North America, with mention of related forms occurring on other animals, by Herbert Osborn, professor of zoology and entomology, Iowa Agricultural College, Ames, Iowa (*Bulletin* No. 5, new series, division of entomology)," lately issued by the Department of Agriculture, discusses "particularly those insects which, by direct attack upon domesticated animals, render themselves an injurious element to the stock-breeder, poultry-raiser and keeper of various animals for pleasure or profit."

Copies of this bulletin can be secured from the superintendent of documents.



Union Building, Washington, D. C., for twenty cents.

The Dairy Division of the Bureau of Animal Industry has lately issued a report on "The Cheese Industry of the State of New York," by B. D. Gilbert, special agent (Bureau of Animal Industry Bulletin No. 15), which discusses its history, development and present condition, and contains a chapter by G. Merry, special agent, describing in detail the most approved method of making full-cream factory cheese, together with an appendix containing tables showing (1) the New York receipts of butter and cheese; (2) transactions of the Utica Board of Trade; (3), transactions of the Little Falls Board of Trade; (4) transactions of the Watertown Board of Trade, and (5) production of cheese in New York State, by counties, for periods varying from sixteen to fifty years.

The following table of contents indicates the scope of the report:

History of cheese-making in New York State; Early cheese-making in other States; Statistics of cheese production; Statistics of exports and imports of cheese; Fancy cheese-making; Cheese factories in New York; Dairy boards of trade in the State of New York; The future of the American cheese trade; Factory cheese and how it is made, and an appendix.

This publication is not for miscellaneous distribution, but copies can be secured from the superintendent of documents, Union Building, Washington, D. C., for five cents.

### Farm Lands as an Investment.

"Apparently," says the London Agricultural Gazette, "we have to look in an unexpected quarter to find the most striking example of confidence in the revival of agriculture," and proceeds to review an interview with a "millionaire financier" named E. T. Hooley, published in the *Estates Gazette*. This shrewd and successful man of business has invested, it appears, over half a million pounds in land, in seven English counties, during the last fifteen years, and he declares his intention of going on till he has invested a million pounds in the same security. Within the last six months his investments of this kind have amounted to nearly £30,000, including the

purchase of an estate in Wiltshire of 1200 acres, with a mansion and a number of cottages upon it, as well as a quantity of timber, at the low price of £5500. All the land he has bought is situated in seven counties—Cambridgeshire, Derbyshire, Norfolk, Wiltshire, Essex, Notts and Hunts. This geographical distribution, he explains, is not altogether accidental, as there are some counties in which he would not buy land. That is to say, he would not buy land at a remote distance from London. "So long as you buy your land geographically right," he says, "you cannot go wrong; and by geographically right I mean not more than three or four miles from a station, within easy distance of good manure and good markets." He adds, however, that it must be good corn-growing land. But he qualifies this statement by asking of what use it would be to have only good wheat land, if the price of wheat be low, or only good sheep land, if mutton comes down to fourpence a pound. "One ought to have land upon which one can keep a fair head of stock," he adds. He states that he has some of the finest wheat-growing land in England, which he lets at five, six or seven shillings an acre—land that grows six quarters to the acre; and, apparently, none of it cost him as much as £20 an acre, while some has been bought as low as £5. He is farming 7000 acres himself, which he will not let, because it pays him better than any of his other investments. There never was a more favorable time than the present, he declares, for investing in land. Twenty years ago, he adds, when investors could get 3 per cent. for their money invested in land, real estate was considered the safest investment; and that was at a time when agricultural land was worth £60 an acre. Now the same land has gone down in many instances to £10 an acre, and you can buy it today to pay more than 3 per cent. Why is it, then, that, if it was considered the national security at £60 per acre, with a 3 per cent. yield, investors should be frightened at it now that it has gone down £50 an acre? Obviously, he argues, such land cannot go down another £10 an acre, since that would be the vanishing point; while there is, on the other hand, abundant room for improvement in the price. All sorts of things may happen to raise the



value of an estate. A railway may come through your property, a corporation may want a piece of it, or somebody may be anxious for a farm in that particular locality. For example, about three months ago Mr. Hooley bought a farm of 204 acres at £5 an acre, or £1020 in all. Some one wanted it, and he has just sold it for £5100. Again, the value of his land must rise if wheat goes up to forty shillings a quarter. In short, Mr. Hooley considers land a far safer investment than shares in companies at the mercy of directors, and subject to accidents of good or bad trade.

The Wilmington (N. C.) Star reports that from the truck farm of Mr. John F. Garrell there will be shipped this season about 10,000 barrels of lettuce.

A correspondent at Crosby, Texas, states that in the previous ten days that town had received additions to its population aggregating sixty persons, together with their household goods and ten carloads of implements and stock.

A caravan of over twenty wagons, filled with immigrants from Wisconsin, recently arrived at Huntsville, Ala. The people left Wisconsin October 29, and traveled the entire distance in wagons. They will settle on farms in the neighborhood of Huntsville.

Alvin and other towns on the Gulf coast of Texas enjoyed fresh strawberries Christmas.

Mr. M. V. Richards, the land and industrial agent of the Southern Railway, states that as a direct result of the work of his department 2000 settlers have moved to the South and purchased homes and farms on the line of the Southern Railway during the past year.

The Board of Trade of Orlando, Fla., will purchase 100 pounds of broom corn seed to be distributed among the farmers in the

neighborhood of Orlando as a means of introducing the cultivation of broom corn, with a view to the erection of a broom factory at Orlando. It is claimed by those who have tested it that broom corn will produce two crops a season in that locality.

Norfolk, Va., is an important cattle-shipping port. One shipment to London made in December comprised 574 fine beeves averaging 1725 pounds, all raised on two farms in Kentucky. In December, 161 beeves were shipped to Liverpool. These were from Linville, Va. Later, two shipments of 357 and 354 head were made from Newport News for London and Liverpool.

Real estate agents and others in the territory of the San Antonio & Aransas Pass Railway have formed an association to be called the San Antonio & Aransas Pass Railway Co. Immigration Bureau. It has been organized for the purpose of co-operating with the railway company in promoting immigration into Southeastern Texas. The headquarters of the bureau will be at Yoakum, Texas. The president is Charles Peterson, of Rock Island, Texas, and the secretary, M. G. Ranney, of Yoakum.

A recent dispatch from Chattanooga says: "The homeseekers' excursions brought more people through Chattanooga last night and this morning than had before come this way in many months. Railroad men placed the number at fully 300 this morning, and it is probable that later trains have increased this number."

The Land Commissioner of Arkansas says that the State owns something like 800,000 acres of land, which is for sale at \$1.25 an acre.

It is stated that within a radius of ten miles of Taylor, Texas, an aggregate of more than 30,000 acres of new land or virgin soil will be put into cultivation the coming season.



## THE HOTEL ATTRACTIONS OF THE WEST COAST OF FLORIDA.

Florida is called "the land of flowers," but certainly in these latter days an equally appropriate, if less poetical, name would be "the land of hotels." No region of country in the world, perhaps, is adorned with such palatial hostelry as Florida. Ever since the railroad kings began to penetrate the remote regions of the State and opened up the steamship routes to the West Indies and other ports in Southern seas, there has been a growing demand for splendid hotels in Florida, for when this land of unceasing summer was laid open to health and pleasure-seekers the richer classes began to flock there.

Down along the west coast of Florida millions of dollars have been spent in the building of hotels. Away out in the pine forests, high up on the hills of the lake region or browing the waters of the Gulf there will be found today hotels towering in surpassing magnificence.

The west coast is now strung with a chain of hotels, owned and operated by the great Plant System of railways and steamship lines. Beginning as high up the coast as Ocala, with the spacious Ocala House, the Plant people can now accommodate in splendid style their passengers at six fine hotels, one of which is located at Kissimmee, the Kissimmee House; one at Tampa, the celebrated Tampa Bay Hotel; one at Port Tampa, the picturesque Inn; one at Winter Park, the Seminole, and one at Belleair, the Belleview. These are all under the general management of Mr. D. P. Hathaway, superintendent of the Plant System Hotels.

The Belleview is a new hotel, just completed, and will be opened for the first time January 15. It is to be one

of the leading hotels of Florida, and, by reason of its elevation, beside the loveliest of water fronts, Clearwater Harbor, will certainly be one of the most popular with the winter tourists who throng in Florida each winter season. Mr. H. B. Plant, president of the Plant System, has purchased more than 300 acres of land in the neighborhood, upon which he has laid out the new town of Belleair, which is already budding into full promise of a pretentious little city of winter cottages. Surrounding the hotel on a gentle slope will be a lawn, decked with gardens of flowers, which in this climate can be easily kept in bloom all winter. Graded drives and paved bicycle race-tracks will be a feature of the environment. The little town, Clearwater, is about a mile away, and a roadway has been graded there on the bluff that brows the harbor. Everywhere the drives and walks are paved with hard white clay and lined on both sides with tall palm trees. One of the distinctive charms of this place is its high elevation.

The new hotel stands four stories high on the highest spot in all the tract near the waters of the harbor. It extends 300 feet east and west and ninety-six feet north and south, including the broad verandas. The general style of architecture is Swiss, with broad, awning-like roofs extending over the windows sufficiently to shield them from the sun, and yet allowing liberal ventilation and airing.

The hotel will be surrounded by a great park, in which will be planted all manner of tropical flowers, ferns, palms, etc. On the north side, and not far from the hotel, will be a huge pond, or lake, formed by damming up the winding creek that flows through























